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COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR POLLUTION CONTROL BOARD

IN RE: BOARD MEETING
HEARD BEFORE: RICHARD D. LANGFORD
CHAIR OF THE AIR POLLUTION CONTROL BOARD

NOVEMBER 9, 2018
RICHMOND CONVENTION CENTER
403 NORTH 3RD STREET
RICHMOND, VIRGINIA
9:30 A.M.

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APPEARANCES:

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Matthew L. Gooch, Assistant Attorney General

BOARD MEMBERS:

Samuel A. Bleicher, Vice Chair

William H. Ferguson, Member

Rebecca R. Rubin, Member

Nicole M. Rovner, Member

Ignacia S. Moreno, Member

DEQ STAFF:

David K. Paylor, Direct of Department of Environmental Quality

Michael Dowd, Director of Air and Renewable Energy Division

Patrick Corbett, Office of Air Permit Programs

Tamera Thompson, Manager, Office of Air Permit Programs

I N D E X
AGENCY REPORTS

PROCEEDINGS

MR. LANGFORD: Good morning. I'm sorry. I'm looking for my notes. They appear to be lost. I'm calling this meeting of the State Air Pollution Control Board to order.

Before we begin, I'd like to ask everyone to silence his or her cell phone, which I always forget to do.

Now, I'd like the Board Members sitting on the stage to introduce themselves, beginning on my left.

MS. ROVNER: I'm Nikki Rovner. I live here in the city of Richmond.

MS. RUBIN: Rebecca Rubin, Fredericksburg, Virginia.

MR. FERGUSON: Good morning. William H. Ferguson. I am from Newport News, Virginia.

MR. LANGFORD: My name is Richard Langford, and I'm from Blacksburg.

MR. BLEICHER: Sam Bleicher from

Winchester, Virginia.

MS. MORENO: Good morning. Ignacia Moreno from McLean, Virginia.

MR. LANGFORD: Thank you. Also on the stage today is David Paylor, Director of the Department of Environmental Quality, and the Board's legal counsel, Matthew Gooch, Assistant Attorney General.

The item on today's agenda is the minor new source review permit for Buckingham Compressor Station, usually referred to as "BCS" in some of the slides you will see today. Registration number 21599, for those who need such things.

First, the Board will hear from the Department, and Mr. Dowd and Mr. Corbett will be making a presentation on the draft minor new source review permit, a summary of public comments, and the Agency's response to public comments.

Then we'll hear from The Applicant, who will have five minutes to make a presentation, and then respond to any questions that the Board may have.

By the time we get through that, it's probably going to be time for a break, but we'll see how that goes.

Before we begin, I'd like to advise everyone that if you made oral comments at the public hearing or submitted written comments, those comments have been recorded and made part of the public comment file.

Detailed information on the draft minor new source review permit has been provided to the Board and the Chairman of the Board who chaired the public hearing on the draft permit.

In addition, yesterday the Board heard directly from many of the commenters. The purpose of today's proceeding is to hear brief comments from the Applicant and to receive and consider information and representations from the staff on the draft permit.

Finally, conduct which interferes with an orderly and efficient board meeting or interferes with the right of those to speak to the Board is prohibited and could result in your removal from the meeting.

Therefore, we ask that you refrain from making comments or other -- vocal or applause or other sorts of comments while others or speaking or interfering -- also shouldn't interfere with the meeting.

Now, I'll call Mr. Dowd.

MR. DOWD: Good morning, Mr. Chairman, Ladies and Gentlemen of the Board. I am Michael Dowd again, Director of the Air Renewable Energy Division of DEQ.

I am here before the Board today to present a detailed discussion for the proposed permit for the Buckingham County Compressor Station and answer any questions the Board has.

With me again is my colleague, Pat Corbett, and he will pick up the presentation in a couple minutes.

The Buckingham County Compressor Station is a project that's proposed by Dominion Energy as a component of the Atlantic Coast Pipeline.

It is one of three compressor stations in the Atlantic Coast Pipeline, and it is the only ACP compressor station in Virginia.

The Buckingham Compressor Station uses 4 natural gas combustion turbines with a total of approximately 55,000 horsepower to pump the gas through the pipeline.

The proposed compressor station is classified as a minor stationary source under Virginia's permit regulations, but for all intents and purposes, DEQ treated it as a major source in the

permit process to ensure the protection of human health.

For comparison, you can see the distinction in emissions from the major source -- or a minor source, such as Buckingham Compressor Station, and larger major source permitted by DEQ.

You see that for NOx it's permitted at 34 tons a year compared to the Dominion Virginia City at well over at almost 2,000 tons per year of NOx and at Dominion Greensville Facility at 350 tons per year of NOx.

Others are similar, sulfur dioxide, the Buckingham Compressor Station is limited to 8.3 tons a year of sulfur dioxide compared to over 600 tons a year for the Virginia City Hybrid Energy Center and 56 tons per year at the Virginia Greensville Facility.

This is an artist's rendering of the compressor station from the ACP pipeline. This slide shows the location of the compressor station is located in Buckingham County on the north side of Route 56, 5.1 miles northwest of the intersection of Route 60 and Route 56.

Also the proposed compressor station is located where the Atlantic Coast Pipeline would

intersect the existing Transco Natural Gas Pipeline, a major north/south pipeline of natural gas that serves the northeast.

At this point, I want to note that the development of this proposed permit has been a collaborative work involving numerous folks here at DEQ in both our central office and regional offices. Some of the names are up there on the slide.

A tremendous amount of effort on the part of DEQ has gone into this endeavor to ensure that all technical aspects are addressed and that this permit is fully protective of human health. I will now turn the presentation over to Pat Corbett.

MR. CORBETT: Good morning. My name is Pat Corbett. I work in the Office of Air Permit Programs in the central office for DEQ.

First, I'm going to talk about the overall process for permitting, and then get into the specifics of the Buckingham Compressor Station draft permit.

Initially, a source looks at their business and determines the activity they want to perform and where they're going to perform it.

They then go to the local government and

get approval to site their facility there. This is important because the regulations require us to receive approval from the local government that the site is zoned according to the use that the source intends.

The source then completes an air permit application delineating the emissions that they are proposing to have from the facility, and then we review that application to determine that the activity can be completed and permitted in compliance with the regulations and laws of Virginia.

So in our review of the application, the first thing we need to do is determine the permit program that applies. Specifically, whether major new source review permitting applies or minor new source review permitting applies.

In this particular case, minor new source review permitting applies, and applicability is based on the uncontrolled emission rate.

This is an annual rate, but it's calculated by looking at the maximum hourly emission rate at maximum capacity from a unit without any controls regardless of whether they were posed by the source or in a permit that already exists.

Then we take that one-hour value and multiply it out by the nearest -- the hours in a year,

8,760, to achieve an annual emission rate in tons per year.

That rate is then compared to the exemption thresholds that are laid out in regulations, and we determine whether or not the facility is exempt based on the comparison of the calculated uncontrolled emission rates, the exemption thresholds and regulations.

Any pollutant that has emissions -- an uncontrolled emission rate that's less than the exemption threshold is exempt and is no longer reviewed.

Once we know the permit that program that applies, then we look at the Federal and state regulations that may apply.

The State has generally applicable regulations in Chapter 40 of our regulations, and Federal regulations has New Source Performance Standards, or NSPS, if I throw that out there.

They also have MACTs, or Maximum Achievable Control Technologies regulations for these air pollutants.

Once we determine the regulations that apply, we review the Best Available Control Technology analysis for the different emission units at the

facility.

The reason we do it in this order is because we need to make sure that the Best Available Control Technology is at least as stringent as anything else that we already have to do, so we do that in that order.

Then we review, and we'll have the emission limitations that we need, and we'll review any necessary air quality analyses.

Once we have done that review to ensure the public health is protected with our air quality analysis and that the maximum reduction is achieved through our BACT analysis, we then make sure that the monitoring and recordkeeping are required in the permit such that we can determine and ensure compliance with the limitations that we have written.

The drafting of the permit occurs, and we hold public comments as needed. The requirements for that are laid in the regulations, and anytime we go to public comment, we have to hold a public hearing to take oral comment from the public.

For Buckingham, we sent the permit to the Board for consideration, and the public comment period was required and significant public interest.

So overall, Article 6 lays out the

regulatory requirements for any activity that emits air pollution to be able to be permitted and work within the regulations in compliance with the regulations.

The result of our review for Buckingham is that the BACT review is the most stringent nationwide. Our limitations in the permit are the most stringent nationwide, that we did extensive modeling to determine compliance with the health standards that apply, and everything is within the guidelines and the standards that apply for health.

And then we also provided ample public involvement through public comment, public hearings, and various -- you know, working with the citizens, answering questions over the phone.

So some specifics for the Buckingham application. We initially received it in 2015. We drafted the permit in August of 2018. There was a lot of back and forth.

Obviously, I just described, there's a lot of review that we do that goes into any drafting of a permit, and that requires back and forth to sources, applicants, to get clarification and additional information as needed.

We finished our draft in August of 2018. We went to public comment in August, on August 8th of

2018. We held an informational question and answer session on August 16th of 2018.

A public hearing to receive oral comment on September 11th, and then we considered comments until September 21st.

That's akin to a major source review process where the regulation requires us to, after the public hearing, continue to accept comments to allow people time to consider things that they may have heard at the public hearing.

Here's a list of the emission units that are at BCS. Obviously, there are four. The major emission units are four compression turbines.

There is a natural gas-fired emergency engine. There is venting of natural gas just through the normal operation of the facility, and then there are -- the regulations exempt certain equipment that are small. So they're exempt by size, and those are the boiler that's used for space heat, the line heaters, and the storage tanks that are on the site.

Here is a picture of a compressor. It's generic. It's not special to Buckingham. If you look, the natural gas pipeline will be going to the left and right in the white pipe there.

And then if you start in the bottom

right-hand corner, there's your combustion area. You can see the drive shaft going into the gray blob, that's the compressor case.

So the drive shaft goes into the compressor case. There's a seal there, and the impeller that provides energy into the system to push natural gas down the line is actually in the compressor case right there, so it's separated out from the compression turbine.

We did the UER, the Uncontrolled Emission Rate, calculation, and the pollutants that were over their exemption thresholds are nitrogen oxides, NOx; Carbon monoxide or CO; VOC or volatile organic compounds, PM10, PM2.5. And then under state toxics rule, formaldehyde and hexane were over their respective exemption levels.

And BACT for Article 6, it's a defined term, it's about 15 or 20 lines in the regulation. I'm not going to cite it here for you. It's defined. I give you the cite there.

But basically, it's a maximum degree of reduction from each emission unit, and it considers the costs and environmental impacts that are related to the site itself, so it's a case-by-case determination at the site.

There are obviously -- you know, BACT is a national program for the major new source review permit program, so there are implications whenever we do a BACT analysis there.

As I mentioned earlier, it can't be less stringent than a regulation that already applies, so for the purpose of a compression turbine, a combustion turbine, New Source Performance Standards, subpart KKKKs applies, that limit is 25 parts per million for NOx.

So we can't be less than -- or we can't be more than 25 parts per million. Obviously, we're not, so we do that review.

And for the particular Buckingham Compressor Station, we looked at permits nationwide. So when we're doing a BACT review, we look at permits that Virginia issues for minor new source review, and we compare what the applicant proposes.

Then we also looked nationwide to ensure that we had the most stringent permit nationwide for the Buckingham Compressor Station.

Once you go through a BACT analysis, determine the control technology, and the reduction, you have to write emission limitations that result from that BACT analysis.

Whenever you write emission limitations, those limits have to be enforceable. They have to have a compliance component, so that we can have inspectors go out and understand whether or not a source is in compliance.

And then limits in an Article 6 permit are generally federally enforceable. Federally enforceable requirements are in the state plan.

We have some programs that aren't included in our state limitation program. Those requirements would be state-only enforceable.

For Buckingham, it's the state toxics regulations, is only in the State of Virginia. So pollution control technology review, our BACT review, the result of it was that we used selective catalytic reduction for the reduction of NOx.

It's important to note in our review that most permits in the country are issued with 15 parts per million as the NOx standard.

The turbines that were proposed, the solar turbines, can achieve 9 parts per million without any controls, so without any controls, they're already better than permits that are issued in the state.

CO, VOC and formaldehyde. Formaldehyde is a VOC. It's also a toxic pollutant under our state

regulations. That's controlled by oxidation catalysts.

For carbon monoxide, most limits in the state and in the country are 25 parts per million, and for VOC, it's 2-and-a-half, between 5 and 2-and-a-half parts per million are the general limits.

So what do catalysts do? Catalysts enable chemical reactions to take place over lower temperature or wider temperature ranges, and also they can increase the speed at which those reactions occur.

So what you're trying to do is you're trying to increase the speed so that while the pollutants are still in the duct, you're removing them from the atmosphere, turning them into nitrogen, water, or CO2 and water, as the case may be.

Selective catalytic reduction, or SCR, We add ammonia. The reduction of NOx to nitrogen requires ammonia to complete the reaction, and so the catalyst allows you to complete that reaction with ammonia quicker, so you have to inject ammonia into the stream.

So here's a really, really simple diagram of the SCR. From the left, the turbine exhaust, which contains NOx among other things, is coming from your left.

You injected ammonia prior to the catalyst, then it flows through the catalyst. The

reaction is in -- the speed of the reaction increases in the catalyst, and then out the end comes nitrogen and water.

Now -- oh, I'm sorry. Oxidation catalyst was the other control technology, And it's important to note that that is just essentially the blue lines. There's no additive. There's no other constituent that needs to be added to these upstream in order for the reaction to occur.

Just the carbon -- the CO in the stream as it goes through the catalyst and reacts to form CO2 and water, so there's no temperature addition. You don't have to heat it. You don't have to add any other reactants.

So the proposed air permit, we didn't specify control efficiency. Control efficiencies are usually not the greatest approach to limiting pollutants, and that's because, you know, if you have a large pollutant inlet load, you can have a much higher exhaust rate if you just monitor control efficiency.

You can also -- if you have a very low pollutant load inlet, control efficiency can be really hard to get. Such is the case here where you only have 9 parts per million coming in, so achieving a 99-percent reduction would be much harder than when 25

parts per million of NOx is coming in.

So that's an important thing to note. Our limits, 3.75 -- "PPM" is parts per million. There's a correction to make sure that it's comparable and sources can't dilute the exhaust air.

And any concentration, if you add clean air, ambient air, into the exhaust stream, that would dilute the concentration of the pollutant, so when you're using a concentration limit, you have to have a correction so that you always have a standard approach measuring the limit.

Performance testing. As I mentioned, we have to have compliance components with any BACT limitation. We require testing every two years.

So that goes on in perpetuity. There's an initial test. Once the source starts up and the unit is running, we have a test to demonstrate compliance, and every two years after that, they have to retest.

In between those two-year tests, what we do is we measure parameters that are important to the proper operation of the system.

So in this case, it's the temperature of the catalyst. If you don't have sufficient temperature, then the reaction won't occur.

So you have to get up to a bare minimum temperature, so you have to monitor that continually. That's every hour. That's -- and they have to maintain records.

You also have to, you know, add ammonia, so we need to track the injection rate, so those are two of the important aspects that we're monitoring on a continuous basis in between the performance tests.

And then as, you know, we've mentioned before, the NOx limits, the CO limit and the VOC limit are the most stringent permit limits that we could find.

As I mentioned earlier, there are venting of natural gas operations in the normal operation of the system. Natural gas contains methane, ethane. Those are the two main constituents of it, of natural gas.

They also contain VOC, volatile organic compounds, and hexane, which is a toxic pollutant. It's important to note that methane and ethane are not volatile organic compounds.

EPA goes through a whole process to determine, quote, chemical reactivity, and methane and ethane are excluded from the definition of VOC.

So there are the four mechanisms by which

natural gas is vented from the facility during normal operation. Some equipment leaks from pumps, flanges, valves. You know, anything where two bolts put something together, it has a tendency to leak.

There's also line-cleaning operations, referred to as pigging. Start-up and shutdown of the combustion turbines require venting of natural gas, and then there's emergency system tests that also vents natural gas from the facility.

Equipment leaks. As I said, valves, pumps, flanges. Those are all points that need to be maintained properly to ensure that we minimize the number of leaks or the amount of leak that come from this facility.

And the way you do that is you have ongoing inspections, often referred to as LDAR, or leak detection and repair.

So what did we determine to do for BACT. BACT -- the NSPS requires quarterly LDAR, leak detection and repair. Quarterly requirements to do a survey, walk around the plant and understand what components are leaking.

We require daily walk-thrus. Daily walk-thrus of source -- somebody from the source has to walk through the facility, make sure the facility is

operating properly and not leaking.

They have to fix those leaks as quickly as possible, so we have a daily walk-thru, then we also have a quarterly walk-thru.

That quarterly walk-thru, we use a camera, an optical gas engine camera. It's basically just, you know, you take and you point the camera at it, and you can see the gas, obviously natural gas is not visible, but you could see the natural gas that was wafting out.

You also have to fix repairs as soon as possible, so there's time frames in there, to make sure that the minimum time frame is as soon as practicable.

And again, with the comparison, most permits have just the quarterly LDAR requirements that are the same, the NSPS, we're obviously more stringent than that by having a daily walk-around as well.

Pigging operations. So pig, it's an industry term. It's the method of removing condensation.

When you put any gas at high pressure, impurities have a tendency to drop out and condense at high pressures, and so you do not want those liquids to build up in the natural gas pipeline.

So on occasion, you have to send a

squeegee, essentially, down the line, using the pressure of natural gas, pushing it down the line, collect those liquids and get them out of the pipeline.

That's what a pigging event is, and the way you control emissions is to minimize the number of events that occur.

Compressor start-up and shutdown. There's a little, possibly, confusion about start-up and shutdown.

Compressors, they operate -- during the combustion phase, they start up and shut down, and start-up and shutdown combustion emissions are considered. That's not what I'm talking about here.

What I'm talking about is once the turbine shuts down, there's a seal, as I talked about, that keeps the natural gas from leaking out into the building.

Well, that seal stops working because the seal is pumping natural gas into the line, pressure is building up, and if that pressure builds up too much, it's obviously bad. And so what they do is they open up the valving, shut down the turbine and just vent that gas.

So as I said, the compressor gas -- the compressor case pressure increases, and so what we

determined was that the use of a vent gas reduction system, or VGRS, is BACT.

What VGRS does is it takes that increase in pressure, it pulls the natural gas out of the compressor case, pumps it back into the suction line of the facility. Thereby, relieving the pressure inside the case.

And then you don't have to have a venting event where it shuts down, and so that's kind of how -- a simple way of describing how VGRS works.

So the other thing is, you know, the application had a hundred start-ups and shutdowns a year. They were vented every time.

With the VGRS, they still need to be able to get into the turbine and do maintenance. It's just a fact of life. You have to maintain equipment to make sure it runs properly.

So we minimize the number of events that they can shut down -- or that they can vent for, so it's 10 events per year for venting.

There's still a hundred start-up and shutdowns for combustion emissions that are considered, but the venting events are limited to 10.

The other thing we can do with the VGRS is we can pump down the pressure, so the amount of gas

that's in any container is based on the pressure -- in part based on the pressure of that container.

So if you pump down the pressure of the container, you have less gas, so with VGRS, we pump down the pressure of the container to pretty close to atmospheric, and we significantly limit the amount of gas that's available for venting.

One thing to note on the VGRS, there are stations that use the technology. It's not unheard of. It's just never been required to be used.

So that's something that, you know, sources could use at their leisure, but it's required in this permit.

We have to monitor the pressure of the compressor case, pump it down to the amount that we told them -- they told them to in the permit, and then they also do them 10 times a year.

I mentioned emergency shutdown system testing, ESD testing, if I throw that out there. Sorry.

So you want to test your emergency response systems to make sure that they work. The test is required by PHMSA, the Pipeline and Hazardous Materials Safety Administration. It's required once a year, so they must do this test by another safety

regulation.

Normally, what you do is there is a valve that leads to a vent, and they open that valve, and that would vent all of the gas in this facility, 4-million cubic feet, So that's what that system does.

When you talk about a blowdown event -- you've probably heard that term thrown around -- that's frequently what people are talking about, is that this large site-wide blowdown event that happens once a year.

So if you put a cap on the end of the pipe, you can open that valve and not vent all of that gas, so the control technology that we propose using is capping of the EST test event. Right.

So you essentially have the emergency valve, you put another valve above it, you close that valve. When you test the EST valve, it opens up, and the amount of gas that's released is just the difference between the two valves. It's not the entire station.

So some compressor stations use caps, but again, it's voluntary. Here, it's required. This is a quick comparison of the three Atlantic Coast Pipeline compressor stations.

West Virginia's permit has already been

issued. North Carolina's permit has already been issued, and you can just go down and see -- we also put up there the original Buckingham application.

So it's a comparison of the initial application after our review and back and forth with the source what the draft permit has, then West Virginia's and North Carolina's, just for information.

There's been a lot of talk about methane emissions from the facility. Article 6 is prohibited from regulating methane by the regulation, but it's important to note that natural gas, as I said, has VOC and hexane.

So our BACT requirements for VOC and hexane also limit the methane that can be emitted from the facility.

So just from the cap ESD testing, we avoid about 4.1 million cubic feet or 2,000 tons of CO2 a year from the reduced start-up and shutdown events, and the pressure of pumping down -- pumping down the pressure from -- the operating pressure down to 33 -- 44.7 PSIA, you avoid 51,000 tons of CO2 a year.

Also, calculations from leaks are really hard to quantify, and so it's -- they're very small emissions.

So it's usually not -- we're calculating

how much actually you're reducing it by, so all of these calculations in the permit assume that we're not doing anything, but we're clearly doing a daily walk-thru according to the LDAR, so that's the control technology, the BACT review.

Now, we're going to talk about air quality analysis and dispersion modeling. It's important to note that, you know, we have National Ambient Air Quality Standards.

They're health-based concentrations. There's a primary and secondary standard. The primary standard protects human health including sensitive populations.

The secondary standard is for the environment, the public welfare, so crops, land, livestock, with respect to BACT. And the rules are national. They apply to the entire United States.

NAAQS are promulgated based on the pollutants. Pollutants have different impacts, pollutants have different time frames that they may be a problem.

So the requirements are -- in the NAAQS are short as one hour and as long as a year, so it's not a single one-hour standard or a single annual standard.

There's 1-hour, 24, 3-hour, 8-hour. It depends on the pollutant you're looking at, and Buckingham County meets firmly and will continue to meet based on our air quality analysis, all National Ambient Air Quality Standards.

In order to do a modeling, you have to have background. The background values we looked at were based on areas with higher population, higher -- so what a background value does is it considers all, like, the traffic, wood stoves, different things that are in other facilities that emit pollutants in an area.

So that's why we do the background concentration. We selected monitors from areas that have higher population, higher vehicle emissions, higher facility emissions than Buckingham.

And then we also, on top of, that modeled the Buckingham Compressor Station and the local sources. So Kyanite Mining is a big source in the area, that was part of the modeling.

And when you looked at the detailed information, we have background material concentration and a modeled impact. The modeled impact is the local sources and Buckingham, it's the two of them together.

And so you add the background

concentrations to the modeled impacts. Emissions. You know, we -- when looking at emissions for BCS, we utilized the maximum emissions, the peak emissions.

If we're looking at the 1-hour emission rates, that are worst case with 1-hour standards. If we're looking at 8-hour standards, we're looking at the 8-hour worst case.

All right. And then you also have dispersion characteristics, like stack boilers, how fast is the gas getting out, how hot is the gas. And those are going to be different based on the loads or how hard each turbine is working.

And we looked at multiple operational scenarios, as well, to make sure that we were looking at every scenario to make sure the public health is protected.

And then obviously the worst case, as I just said, depending on the averaging time. So, you know, as I talked about earlier, we had a list of the pollutants that were subject to permitting because they had an uncontrolled emission rate that was greater.

Then these are the list, one-hour NO2, you know, one-hour CO, 24-hour PM10, there's a list there, and the result is that the model impacts and the local sources, Buckingham Compressor Station plus the

background concentration are all less than both the primary and secondary NAAQS.

We also have a state air toxics rule, state-only enforceable. It defines toxic pollutant, that's the actual term that's used, so there's a definition for it.

And it requires that sources cannot be permitted unless they demonstrate compliance with the Significant Ambient Air Concentration, or the SAAC. It's a health-based standard.

There are one-hour standards, that's one hour, and then there are annual standards, so the value that the SAAC is, is based on the pollutant.

It's different pollutants have different impacts, so you wouldn't want to have one standard where it's basically fixed on a particular pollutant you're looking at.

And there we also -- again, those are worst-case emissions for one-hour periods for the one-hour standards, and worst-case emissions for the annual periods for the annual standards.

All right. So we modeled pollutants that are over the exemption thresholds, so we're looking at formaldehyde and hexane.

Formaldehyde was over the exemption

thresholds for the one-hour standard, the one-hour exemption rate, and the annual exemption rate. Hexane was only over for the one-hour amount.

So the annual amount was exempt, so that's why we only modeled those three, and then, again, everything we modeled was less than significant ambient air concentration that applied to that averaging time for that pollutant, and it's protective of human health.

The public comment period. We've gone over this a few times. August 8th, we started the comment period. August 16th, we a had a question and answer.

September 11th, the important part here is during the hearing, 191 people showed up, 60 people commented, and we received more than 5,300 comments from citizens, source, various environmental groups, and elected officials.

The summation of the comments, real briefly, that the limits don't reflect BACT, that the facility should use electric turbines instead of natural gas-fired turbines, the facility impacts we didn't determine them or they're too high, that we should have required a risk analysis.

There were comments that the NAAQS and

SAAC are not protective of human health, that any increase is unacceptable, that the monitoring in the permit is inadequate, basic opposition to fossil fuel use, environmental justice issues, site suitability issues.

And then we received comments that supported the facility as well, so our response to those comments, trying to hit the highlights here.

The parts per million limitation in the permit just said PPM, and the correction was to, as I noted, you know, to make sure there was not too much excess air, 15 percent oxygen.

We did want to make that clarification, as requested, that it's on a volume basis and dry basis, so that you take out the moisture.

That's the standard correction. It's a clarification, not an actual change to the permit. We did not require NOx continuous emission monitoring systems, or CEMS.

Comments indicated that there was no monitoring in the permit that would assure compliance on a short-term basis.

As I discussed, we have extensive monitoring in the permit and biannual testing to make sure that on an ongoing basis in perpetuity the sources

are complying with the limits of the permit.

There was also question, so when you're operating a turbine, the emission rate at different loads or different power outputs is different.

At operation less than 50 percent, if that were allowed by the permit, that would indicate that they were emitting at a higher rate than what we were allowing.

So I clarified that no permit precludes operation at less than 50-percent load except during startup and shut-down. It might be a little wonky in the permit about how that language works, but it's clear that it's prohibited.

We also indicated that the comments about warranties and warranty emission rates are irrelevant because there were permit limits, and those permit limits are what need to be complied with.

The warranties set the stage for us to determine what emissions are, and then do our analysis, but the permit limits the emissions.

And that's what we're looking at when we go to the source and determine compliance, and then we -- I used incorrect phrasing in the permit, it wasn't a change, just terminology about the mode of operation of the turbine, what the characterization is, SoLoNOx mode

versus non-SoLoNOx mode.

It's not an actual change to the permit. Our response to the BACT comments. Specifically, the NOx limitations are not low enough, this -- the comments indicated that the source should be subject to the same limitations as an electric generator unit.

These -- that type of comparison isn't proper. BACT is for a similar source, so an EGU is much larger.

The turbines that were cited are on the order of magnitude of at least four times bigger than the turbines here.

And obviously when you're doing controls, the cost effectiveness of any technology is based on the amount of pollution coming in, so the more pollution you have coming in, the cheaper it is to reduce every time.

Also, the application, the cost effectiveness of the control technology that we're using is $30,000 a ton, which spending more than that is excessive.

Electric turbines. Our response to electric turbines is that we view the proposed emission, there's a concept called redefining the source.

Businesses have to be able to determine the activity that they're doing and how they're going to do it.

And DEQ doesn't determine how people make widgits. We look at their proposed emissions and emission units to determine how we can reduce those emissions.

So we can require them to make alterations to their system, like, say, adding catalytic reduction.

So selective catalytic reduction requires a different design than, you know, the straight compression turbine controls, but it's a minor change to the design.

Replacing a natural gas-fired turbine with an electric turbine is a wholesale replacement, and it's inappropriate in redefining in the source.

And then again, you know, BACTs is emission limitation, and the emission limitations in this permit are the most stringent limitations for compressor stations that we could find.

Air quality impacts. The air quality analysis followed all EPA guidelines, and we made assumptions during the entire process to ensure that we were conservative in protecting human health.

So as I mentioned, the NAAQS protects human health -- the primary NAAQS protects human health, sensitive populations.

The secondary NAAQS protects livestock. Our modeling, we used the worst-case emissions, and it demonstrates compliance with those.

So, like, an example of worst-case emissions are compressor turbines have exhaust air -- or inlet air, and the temperature of that inlet air changes, or the density of that inlet changes the temperature.

So the colder something is, the more air can get into the same space. That increases the power output. So we assume that for 8760 that it was going to be zero degrees Fahrenheit outside, that the inlet air would always be zero degrees.

As that temperature of the inlet air comes up, this air hits the turbine, and your amount of emissions goes down, so during normal operation, the max emission limits are overestimated considerably.

So the other thing in our air quality analysis is background monitor concentrations. People indicated that the background monitors weren't indicative of Buckingham County.

One of the things that people commented

on is that the population density is different. The Buckingham County census data by the government is 29.2 people per square mile.

We received reports about an informal survey, which you heard about yesterday, that indicated that there were almost 200 people living in a 1.1-mile radius.

So if you're trying to compare the two numbers, you have to determine the area of the circle, and divide that into the 199, you get 52 people per square mile.

So in our response to comments, we looked at and made sure that even if we used that informal survey, that that wouldn't change our results.

Okay. So the background concentrations are -- the background concentration monitor sites still have higher population, higher emissions, it doesn't change our selection of those sites.

In response to the comments that NAAQS and SAAC aren't protective, they are. In the initial rigorous process the EPA goes through to determine that -- what the NAAQS are, I don't need to go into that too much, but, you know, it takes a long time to get into.

And that the significant ambient air concentrations are based on health-based standards, as

well, and they're in the regulations and protective of human health.

Questions were asked about what happens if the NAAQS changes in the future. If something changes in future, then facilities will be required to put on controls and reduce emissions further.

That's -- we can't foretell the future, but that's what's required. Again, use the maximum emissions, as I've exhaustively said.

Use the max emissions -- maximum emissions for the NAAQS and the SAAC, based on the averaging times applied for that pollutant.

One of the last comments was impacts on the Chesapeake Bay. You know, an air quality permit is not a mechanism to implement TMDL.

So there's no authority for us to regulate the TMDL in Article 6 permit, but in looking at the analysis, the comments didn't follow the Chesapeake Bay program analysis and overstated the impacts about by a factor of 4.

So that's just for your information. The Chesapeake Bay program --

MR. LANGFORD: Would you say that last sentence again? I didn't catch all of it.

MR. CORBETT: So the commenter indicated that there was an impact of 2,500 kilograms, I think it was, and our -- you know, the calculation following the Chesapeake Bay program was 400.

As part of the Chesapeake Bay program, you know, review they also looked at the Clean Air Act and the reductions projected into the future that were going to come from the Clean Air Act.

And states determined that -- and EPA determined, in signing the Chesapeake Bay agreement, that that would be sufficient for the Clean Air Act requirements, so -- oh, I'm sorry. The risk analysis.

You know, as I have talked about, the NAAQS and SAAC are in the regulations. They are health-based standards, they are protective of human health.

There is a rigorous process that NAAQS go through, and we -- our permit programs are there to ensure compliance with those standards.

People cited other compressor stations as indications of what would happen. In looking at those compressor stations, they were in the middle of gas fields. They didn't have permit limits anywhere near the same as what Buckingham is going to have.

You know, talking about site-wide

blow-downs, you're talking the difference between 4.1 million cubic feet and 280 cubic feet.

You know, that's the type of differences, they're not really comparable, and then there a lot of aspects that go into a human health study.

We have to look at genetics and health histories. We have to look at being able to regulate water, and traffic, noise, stress. These are all parts of comments that were made.

Now, I'm going to turn it back over to Mike.

MR. LANGFORD: Thank you.

MR. DOWD: Thank you, Pat. I do want to go back to one thing that Pat mentioned, that is on NAAQS.

We received a lot of comments on whether the NAAQS are protective of human health sufficient -- sufficiently protective of human health.

And I'll just go back and restate that Section 109 of the Clean Air Act requires EPA to establish the NAAQS at a level that's sufficient to protect human health with an adequate margin of safety.

Now, that's just, you know, one sentence.

What EPA actually does, I want to get into that a little bit, of how complicated and extensive the process actually is.

And I mentioned yesterday, also Section 109 of the Act also requires the EPA to revise or revisit the NAAQS through a re-evaluation every five years.

So what EPA does, it goes through a very extensive five-step process. It takes at least five years, and oftentimes more, because EPA oftentimes does sometimes miss its five-year mandate on the review period.

First of all, EPA has a planning stage in which it sets forth the planning, the schedule, and policy workshops, and it culminates with what's called an integrated review plan.

The integrated review plan goes out for public comment, and at the same time, I want to say, every step of the way EPA is working with two professional groups that are required under the Clean Air Act.

The first is a seven-member group called CASAC, the Clean Air Science Advisory Committee, and under the Clean Air Act, EPA is required to consult with CASAC when it develops the NAAQS.

It's -- CASAC is a seven-member organization, seven -- seven committee members. They're supposed to be health experts. They're supposed to represent various types of organizations -- various types of interests.

And one, for instance, I'd say they had a state air quality director, like me, a guy from Georgia who's on CASAC because he's a state-related person.

There's another director, an African-American, Dr. Corey Masuca from -- who's head of the air program in Birmingham, Alabama, who is also on the program.

In addition to CASAC, CASAC has its own expert group that -- that reviews all of the materials with that for each criteria pollutant.

CASAC reviews all of the criteria pollutants, but each criteria pollutant itself has sort of a sub-CASAC, a mini CASAC, that analyzes -- under contract, that analyzes all of the data, advises CASAC, advises EPA, as well, through the steps.

Well, as I said, there's a five-step process. CASAC is there with EPA all the way. For step one, EPA actually prepare -- itself prepares the documents.

So the first step in the planning process

is developing what I said is an integrated review plan, which sort of sets the schedule for the development of the NAAQS, and that all goes to public comment.

The second step of the process, this is one of the key steps, is integrated science assessment, the ISA.

This is the step where EPA actually looks at the basic science, health effects science, that -- for each particular pollutant in the review process.

Here again, EPA develops an integrated science assessment, and it goes to CASAC, and the CASAC review committee for review. It also goes out for public comment along the way as well.

Now, following the integrated science assessment, which EPA then revises based on comments from CASAC, there is another scientific step along the way called a risk exposure assessment, the REA.

And it's at this point where EPA looks at specific science on human exposure, the health effects of exposure, based on the general science that is in the integrated science assessment.

And here again, the risk of exposure assessment, the REA, goes through an extensive peer review, CASAC review, health science expert review, goes to public comment.

And when EPA comes out with its risk exposure assessment, the next step is EPA works on a policy assessment. There's a fourth step in the process.

And the policy assessment ties all of the science in with EPA policy considerations, sort of merges the legal with the science, and comes out with a document, which along the way again is all fully public reviewed, peer-reviewed, science-reviewed.

And CASAC, the expert -- the expert contractors who work with CASAC, goes to public comment.

And based on the policy analysis, EPA goes through step five, which is the formal rule-making for a either revised NAAQS, a new NAAQS, or a decision not to revise the NAAQS.

EPA can do two things. It either revises the NAAQS, like with ozone back in 2015 it had an extensive review process, and in 2015, it lowered the ozone NAAQS from 75 parts per million to 70 parts per million.

Other standards more recently, I think, that are particular, EPA said, well, you know, we're not going to go over that, so they went through the review process and the science didn't warrant lowering

the standard at this point in time.

So that's the process EPA goes through. It's very complex, very science-oriented, very health-science oriented.

It involves people all over the country, experts all over the country. It goes through extensive public comment, and so that's why we have -- that's where the NAAQS come from that the states implement.

So I just think it's important to get that across. There were lots of comments that said the NAAQS weren't protective enough.

And all I can say is the EPA goes through a very extensive process each time it revises the NAAQS, rooms full of documents, et cetera. They're all publicly available on EPA's websites.

And I'll give you two examples. Just very recently, in October of this year, EPA put out its integrated -- what did they call it -- their integrated review assessment for the ozone NAAQS.

You know, we just had ozone NAAQS in 2015, EPA has already begun the process to revise or look at -- you know, review the ozone NAAQS for its next review period.

It's already came out with its integrated

review process, and that's set in the schedule. The same thing with PM, PM2.5, a little bit further along on the process where they've actually reviewed their integrated science assessment from EPA came out in October.

So EPA is under a constant schedule, revising, looking at the NAAQS, reviewing the NAAQS, for the six-criteria pollutants on a constant basis.

And it's a very complex science in every process, so I just wanted to discuss that to just bring up the fact we believe that based on the processes, that, yes, protective -- the NAAQS does protect human health, and it will protect human health in Buckingham as well as the rest of the state.

There was a comment made yesterday that there is -- yes, there is one part of Virginia that is slightly above, slightly -- it is in violation of the ozone NAAQS, that's Northern Virginia.

I'm happy to say that recent data has indicated that all our monitors are now in compliance with the 70 parts per million standard up in Northern Virginia, and we hope that stays.

D.C. and Maryland aren't quite -- aren't quite there yet, but we've made great progress in ozone over the past couple of years.

Okay. Let me move on here. Response to the comments that DEQ did not adequately address the concerns of environmental justice advocates.

Let me say two things. First, DEQ applies its laws, regulations and program even-handedly throughout Virginia.

DEQ would have proposed the identical permit for this project no matter where it was located. First, DEQ does rely on local governments to make land use decisions.

Once a site location is determined and approved by local government, DEQ's permit requirements are the same wherever the facility is located.

That is because here, particularly, the technology proposed would make the Buckingham Compressor Station the most stringently-regulated compressor station in the country, as Pat just described.

And also as Pat just described, because the permit is completely protective of public health as demonstrated by the air quality monitoring that we discussed.

The second point I want to make with respect to environmental justice is I think we can all agree that a significant component of environmental

justice is community outreach.

In this case, the DEQ has engaged in an unprecedented amount of community outreach. DEQ has a website, a web page, dedicated to the Buckingham Compressor Station, all relevant documents relating to the proposed permit, including all public comments, have been posted.

In addition, most relevant documents can also be found at the local Buckingham library for those who do not have access to the web.

DEQ held an informational meeting on the draft permit in the community of Buckingham, and also held an informal discussion with community leaders on the permit as well.

DEQ has had an open-door policy for the public, and staff has had many telephone calls and e-mail exchanges with community members related to the proposed permit.

DEQ has ironed out a transparent, open and inclusive public process on this proposed permit. Okay. Next slide.

Now, turning to the issue of site suitability, DEQ received a number of comments claiming the Department did not adequately address the requirements of Virginia Code 10.1-1307 (E).

DEQ strongly disagrees with these comments. The four factors of Section 1307 (E) are: One, the character and degree of injury to, or interference with, the safety, health, or the reasonable use of property which is caused or threatened to be caused; Two, the social and economic value of the activity involved; Three, the suitability of the activity to the area in which it is located; and four, the scientific and economic practicality of reducing or eliminating the discharge resulting from such activity.

With respect to factor one, DEQ met this requirement by conducting worst-case air modeling for the proposed compressor station which demonstrated that its emissions would not result in any exceedances of health-based air quality standards.

DEQ met the fourth factor by conducting a thorough BACT analysis to ensure the application of the Best Available Control Technology.

Thereby, making the Buckingham Compressor Station the most stringently regulated station in the country.

Four, next slide, DEQ addressed the economic value and site suitability requirements of 1307 (E)(2) and (3) by not issuing the draft permit and

commencing public comment until after the Buckingham County Board of Supervisors had certified the compressor station met all local zoning requirements.

This certification by the Board of Supervisors means the Buckingham Compressor Station thoroughly examined the proposed project and determined it complied with all local ordinances and other requirements.

Section 1307 (E), the State Air Pollution Control Law, has never been interpreted as allowing DEQ to substitute its judgments for that of local jurisdiction with respect to issues within their particular expertise.

DEQ does not interpret 1307 (E) as giving the Department authority to overrule decisions of local elected officials on economic, safety and site suitability matters unrelated to clean air.

Although Section 1307 (E), on its face, appears to contain no boundaries, DEQ has always interpreted the section as applying only to clean air.

This is because Section 1307 (E) must be read within the context of the State Air Pollution Control Law and the entire Virginia Code.

The legislative scheme of the Virginia Code is an interlocking puzzle. The State Air

Pollution Control Law is only a single piece of that puzzle.

When a piece of that puzzle is pulled out of place, the entire framework would collapse. This is why DEQ has always referred to the statutory authority of local jurisdictions, and does not apply 1307 (E) to matters outside the Department's expertise and jurisdiction.

We have used our authority here as it applies to air quality. Now, the Virginia Code confers zoning authority on local jurisdictions.

Section 15.2-2200 of the Code states the legislative intent to encourage all counties to improve the public health, safety, convenience and welfare of its citizens.

Localities are to use zoning as a means to plan and develop highway, utility, health, education and recreational facilities.

The needs of agriculture, industry and business should be recognized in future development. Section 15.2-2210 requires localities to create local planning commissions in order to accomplish those legislative objectives.

Section 15.2-2212 requires that members of planning commissions be residents of a locality

qualified by knowledge and experience to make decisions on community growth and development.

Section 15.2-2280 goes on to say any locality may, by ordinance, regulate, restrict, permit, prohibit, and determine the use of land, buildings and structures and other premises for agricultural, business, industrial, residential, floodplain and other specific uses. Section 15.2-2283 describes the purposes of zoning and sets forth a list of 12 factors localities must consider when making zoning and land use decisions.

These 12 factors basically restate the legislative objectives of Section 15.2-2200 I mentioned before. Now, procedures for parties aggrieved by zoning decisions to appeal to the board of zoning appeals and the circuit court are set forth specifically in Sections 15.2-2311, and 15.2-2314.

Now, we believe the legislative intent of the zoning statutes is clear. Local jurisdictions are given authority to decide local land use issues themselves, based on the experience and expertise of their own local officials and planning.

Administration, there is no indication anywhere that Section 1307 (E) of the State Air Pollution Control law was intended to give DEQ the

power to override decisions made by local jurisdictions pursuant to their zoning authority under Virginia Code 15.2-2200, et seq.

Let me turn now to the action the Buckingham County Board of Supervisors took with respect to the compressor station.

The Board of Supervisors approved a special use permit for the project by a unanimous vote, with one or two abstentions, on January 5th, 2017.

A letter from the Buckingham County Zoning Administrator to the Atlantic Coast Pipeline on January 11th, 2017, contained 41 detailed conditions that the Board of Supervisors attached to the special use permit.

These requirements related to the compressor station's operations, safety, emergency procedures, design, appearance, location, construction, noise, light, traffic, compliance and enforcement.

Now, DEQ received certification of the Board of Supervisors' approval of the compressor station on February 21st, 2017.

Now, while DEQ has no opinion as to the adequacy of the special use permit, it does appear on its face to be quite exhaustive.

I mention this only to point out that

many of the non-air-related issues raised in the comments over which DEQ has no jurisdiction, were, in fact, addressed for local government issue.

Many of the laws and regulations, both state and federal, potentially apply to Buckingham Compressor Station.

The State Air Pollution Control Law is only one. These laws and regulations must be allowed to work independently, without interference from each other, unless such interference is clearly mandated.

If one law, such as the State Air Pollution Control Law, without clear legislative intent, is applied to usurp the statutory authority conferred on local elected officials, the legislative vote of the citizens of Virginia is thwarted and the system fails.

In over 30 years, DEQ has never interpreted Section 1307 (E) as giving it authority to override decisions of local elected officials with respect to site suitability on non-air-related matters.

Moreover, the Department has never been given any legal justification for doing so. Okay. Well, we are wrapping up here.

The information the Board will consider when making a decision on the permit action include the

verbal and written comments received during the public comment period that have been included in the record.

It will also include any explanation of comments previously received during the public comment hearing at the board meeting.

Finally, it will include DEQ files, as well as the comments and recommendations of the Department.

Let me conclude by saying the Board has a unique opportunity to set the standard for future permitted compressor stations.

If this permit is issued, future compressor stations permits across the country will have to evaluate the use of the same controls as required in this permit.

This has the potential of other compressor stations, both inside and outside of Virginia, being required to control methane emissions by vent gas recirculation system and VOC controls.

By having a permit issued requiring the use of SCR, catalytic oxidation, vent gas recirculation system, as well as setting limitations on the number of venting events a source is allowed, other states will be able to use this permit as an example of what can be done.

This permit will allow the Air Board to set a standard, especially on methane, that others could follow, and be a national leader. At that point, I -- do you have any questions?

MR. LANGFORD: I've been asked by several Board Members if they could have a stretch break before we get to questions.

So I'm going to call for a short ten-minute recess, and then we'll come back and I'm sure there will be questions.

MR. DOWD: Thank you.

(Recess)

MR. LANGFORD: Mr. Dowd, I believe you are ready for questions, I believe. If the Board Members could get my attention, I'll try to kind of direct the questions, give everybody a chance to ask their questions.

Assuming there are questions from staff that you have? Are there questions anybody has at this point? Mr. Ferguson?

MR. FERGUSON: Good morning, Mr. Dowd.

MR. DOWD: Good morning.

MR. FERGUSON: Does this compressor station meet or exceed all legal codes of the State of Virginia and of the Feds?

MR. DOWD: We believe so, yes, sir.

MS. ROVNER: Mr. Dowd, what can you tell me about the demographics of Union Hill? I'd like to know about the community. I'd like to know about the race, the age distribution, anything you know about the health status of the community.

I'd like to know about how those compare to the county and how those compare to the state, and I'd also like to know the density of the community as compared to the county.

MR. DOWD: I'm not sure we can answer all of those questions right here on the fly, but we have some of the information for you, Ms. Rovner.

MR. CORBETT: So one of the difficulties

is knowing the exact details of the location. The informal survey, if you just base it on the informal survey, within a 1.1-mile radius, it's 85 percent African-American.

As you heard yesterday, if you go out -- and these are unsubstantiated, you know. They're informal surveys, not --

MS. ROVNER: So just to be clear, DEQ did not conduct the surveys?

MR. CORBETT: No. We have the ability to go to a program that EPA puts out, called EJSCREEN. It's a screening mechanism. It's not -- I wouldn't really rely on it.

But if you look at that, the numbers are closer to the state average. The demographics within a 5-mile radius of the site.

It's roughly, according to EJSCREEN, again, not DEQ's data, but EJSCREEN, is approximately 38 percent minority, and the state average I think is 37.

It's right in the straight-on average. EJSCREEN has a list of information, too, about under age 35 was half of the state average.

Let me pull it up. I had done this review some time ago, and I went back and had to look at it again.

The five-mile radius, obviously, the area of the circle is more than that. The, you know, population density is about 16 people per square mile.

So, you know, the data, when you get into such a rural area, isn't really refined to that level, so if you rely on the informal survey, what was submitted, 1.1 miles is right tight.

But how far out is far enough is kind of a question that, you know, we have to ask ourselves in looking at EJSCREEN, there are no clear issues and clear EJ communities.

They actually list -- EPA has, you know, data analysis, and they look at the ambient air in the area, truck data, Superfund sites, water quality, all of these different statistics or metrics that they put up there in relation to the demographics in a given region.

And when we look at that, which is the only third-party tool that we have available, there are no issues in that area.

MS. ROVNER: My other question is, do you

know the status of the historic district, eligibility determination by DHR?

My understanding of the process, and this may not be right, but there's an eligibility determination that happens before a decision is made about whether to designate it. Do you know whether that's occurred?

MR. DOWD: I don't think we have any information on that, Ms. Rovner. We don't know the stats.

MR. LANGFORD: Other -- yes, Ms. Moreno?

MS. MORENO: Good morning, Mr. Dowd and Mr. Corbett.

MR. DOWD: Good morning, Ms. Moreno.

MS. MORENO: First of all, thank you very much for the presentation. I appreciate your efforts to put it all together in one place for us to consider.

Clearly there's been a lot of work that's been done to get to the draft permit. At the same time, we have yesterday, input from the public, both

for and opposed to the proposed permit.

And so my questions are going to be along the lines of getting some additional information on some of the various points that have been raised in the course of these hearings and also to have you elaborate on some of the things that I heard you, Mr. Corbett, say.

So with that, I'd like to ask you to give us some more detail on how you arrived at the Best Available Control Technology.

What did you look at? How did you factor it in? How did you arrive at that in connection with the permit?

MR. CORBETT: Okay. Do you want me to stick mainly to NOx? I mean, that's the easiest one, or do you want me to go through all of them?

MS. MORENO: Why don't we go through NOx.

MR. CORBETT: Okay. All right. So what -- how it always works is a source proposes BACT, that's the initial step.

They determine what their emission rate is going to be, they look at the economic value, and they propose a BACT determination, and that's where we

start.

So for compressor stations for Article 6 permitting, the first thing we do is we look at other permits that Virginia has issued.

If you look at other compressor station permits that Virginia has issued for the similar and the same turbines, their standards had been 15 parts per million.

When you look nationally, 15 parts per million is BACT nationally for compression turbines. When they're smaller, then you'll use the number they are.

Then obviously the application has 9 PPM -- just basically looking at permits that were available, and, you know, there's data, you use Google, to call different states to find out more information about what they determined and why.

You look at the five PPM, that was actually the most stringently regulated compressor station. The West Virginia and North Carolina permits are the only ones that were issued that had the five PPM in them that I could find.

So then in searching, Maryland had a compressor station that proposed -- it wasn't finalized, so the permit hadn't been issued yet -- it

proposed a value of 3.75 parts per million.

And that was the most stringently limited permit I could find. That's actually -- you know, in non-attainment. There were non-attainment issues there.

And that's why they proposed that, so it's a lot closer to the Lowest Achievable Emissions Rate, which is a non-attainment term.

Doesn't really consider cost, and we said that's what you got to do, and that's what it ended up.

I mean, there's not a lot of review. When a source selects the most stringent permit limit, there isn't a lot more review that you -- that you need to do, because you've already had the maximum achievable reduction.

There are lots of nuances to it. The emission limit has to be demonstrated. All right. So reliance on a draft permit -- sorry, I realize I need to explain this a little bit better.

Reliance on a draft permit isn't actually normal, because that limit hasn't been demonstrated, you know. BACT limitations have to be achievable in practice, and they have to be achievable at all times.

So, you know, oftentimes we look, and you may find a limit that theoretically could be achieved,

but it hasn't been demonstrated, and therefore the source would have the ability to argue that it hasn't been demonstrated in practice, and therefore it can't be BACT.

MS. MORENO: So correct me, please, if I'm wrong, so you're looking at, you know, different emission, and you're looking at most stringent achievable emissions limitations for each pollutant based on the existing -- the best --

MR. CORBETT: Yes. Yeah. That's --

MS. MORENO: But feel free to correct me.

MR. CORBETT: No, no, no. I have a tendency to be a little too detail-oriented.

MS. MORENO: Yeah, I don't want to get into -- what I want to make sure I understand is that you looked at that and you came up with these limits, which, in your view, are the most stringent for this type of compressor; is that correct?

MR. CORBETT: Yes. Yeah, that's

definitely correct, and obviously, then we go to public comment, because, you know, I like to do the best I can, but I'm probably not perfect.

And we can -- you know, we receive comment for other people to find lower limits, and there were no compressor station permits that were submitted that had any lower limits.

So, you know, the public, in their review, also couldn't find that, so that kind of goes to that, too.

MS. MORENO: I'd like to talk about you made reference to a cost-benefit analysis, and you were talking about different things that could be done, that the cost would be excessive.

What I wanted to know was to what did you compare those costs, to what human health benefits, environmental benefits, did you compare the costs that let you know an opinion or a conclusion that doing anything else in the context of the point we are making that the cost would be excessive?

MR. CORBETT: Okay. So generally, when you're starting out, the cost effectiveness calculation is based on two things.

It's based on the amount of pollution removed and the cost of control technology ongoing operation, because remember, this permit will last forever, ongoing operation of that control technology.

So you would -- you arrive at a dollar for time and value, all right, and that's the general term for cost effectiveness.

So common approaches, if you look at the other units, the other permits that are related to similar sources, i.e., other compressor stations, and you look at those permits to determine are the costs that are being borne by one permit applicant the same or relatively comparable to the costs that other permit applicants are currently enduring.

So if a source -- you know, no similar sources have control technology, the cost effectiveness of operating control technology is zero because there is no control technology to operate.

So when you're looking at a relative -- you know, cost effectiveness is relative, you wouldn't compare a cost effectiveness value for landfills to cost effectiveness for an electric generator.

So you'd stay within that source category, If that helps to answer the question. Then you look at -- you know, so right there, because no

other compressor stations have control requirements, that could be -- normally be no control requirements.

So once they propose a control technology, we ask the question, well, what's the cost effectiveness of going further.

And just the cost effectiveness of putting control technology on was $30,000 a ton to remove, and 34 tons of NOx permitted is not large amount of NOx.

And so that cost effectiveness value is quite high because there isn't a lot of NOx remove. Go ahead.

MS. MORENO: It looks likes Mr. Dowd wants to --

MR. CORBETT: Yes.

MS. MORENO: I'm getting that vibe.

MR. DOWD: I'm not sure, Ms. Moreno, that that answer really gets to some of your question.

MS. MORENO: Right.

MR. DOWD: When we look at cost

effectiveness for BACT, we are really only looking at the cost to the applicant.

We do not look at -- do a full-scale cost-benefit analysis across the site, and that is because each permit has two prongs to it.

One of them is the technology prong, which is BACT. We have to make sure that the Best Available Control Technology -- and that is, you know, what Pat just described.

Now, protecting of public health, we look at NAAQS. We regulate to the NAAQS. We do the modeling to make sure the NAAQS is complied with.

Now, if there is a disparity, if, indeed, one puts on the Best Available Control Technology, yet our modeling indicates that there is still an exceedance of the max.

And it could be in the middle of Times Square or it could be in the middle of a lake or a mountainside. If there is an exceedance of this model, we cannot issue that permit. Just -- no matter how much money they spend to control it.

So, you know, if public health isn't protected, the permit is not issued no matter what the cost to the applicant is.

MS. MORENO: And do you consider -- and I have a number of questions --

MR. DOWD: Sure.

MS. MORENO: -- so we'll go through them. If you want to weigh in --

MR. CORBETT: I just -- I realized the point that Mike was bringing up, and I clearly didn't answer.

Environmental impacts that you do consider are things like co-benefits of methane reduction during the venting; whether a pollutant is a hazardous air pollutant or toxic pollutant. Those will change the cost effectiveness calculation as well.

So if something was more dangerous, obviously we would expect the source to bear a higher cost. So sorry about that.

MS. MORENO: No, no, that's perfectly fine. We're having a conversation here so we can have the information we need.

So let me ask you, did you consider any alternatives as part of this analysis, any other -- I

know, you know, cost was an issue.

So you took a look at compressors. Did you look at any additional technology that may be -- maybe something on the cutting edge?

MR. CORBETT: So -- yeah, so for venting natural gas, that's one that probably would have been the better example to go with earlier because of the co-benefits of hexane and methane reduction.

Venting of natural gas, we looked at a flare. You know, had a candle stick flare which, you know, for a simple -- it's just a candle. If the gas goes out, there's a pilot light at the top.

And as the gas goes by the pilot light, it lights up. It looks like a candle -- a candle stick flare.

We looked at requiring that in order to ensure reductions of hexane, methane, VOC, from the venting of natural gas at the facility.

So that was a different technology we looked at. There are obviously some side effects from flares.

When you burn something, you're creating combustion byproducts, like NOx and CO., so there are some downsides there.

There's also, you know, light that would be generated by having a large flare going off in the middle of the night, possibly. That, you know, should be considered.

And when we proposed the flare, the source came back with a vent gas reduction system and actually showed that the reductions were better than the actual use of the flare.

So when you consider the fact that they got more reductions and the negative side effects of using the flare, that would be an alternative control technology that we use.

MS. MORENO: I'd like to talk about equipment leaks. There is a daily audiovisual olfactory AVO site walk-thru. I think one of the commenters commented yesterday that -- maybe the Chesapeake Bay Foundation, suggested that that was not adequate -- an adequate way to identify these. Do you have any additional elaboration on that comment on that process?

MR. CORBETT: Well, I mean, it's a thing that we've done and has been required when you're looking at future emissions at natural gas facilities.

Leaks are comparable, and -- you know, with a electric generating unit. So we looked at leaks at particularly the Greensville facility.

The daily audiovisual factory AVO walk-around was required there, and when we did that permit review, which was two years ago, BACT for equipment leaks was daily, so that was for each -- so we required that here --

MS. MORENO: Would you please explain that a little bit more. Tell me a little bit more about what that means.

MR. CORBETT: So you're trying to compare where leaks happened, so you're looking at -- when you do a BACT analysis, you look at the issue that's proposed.

So the emission unit that we're talking about right now, with fugitive leaks from pipes, valves, flanges, those types of things, and those exist other places.

And the most recent BACT analysis we had done that required daily AVO was the Greensville facility.

In looking around then to do the

comparison, proper comparison to a similar source, we looked around and there were no other people doing daily AVOs.

So there really isn't a whole heck of a lot can be done. Most of the time -- I wanted to have a video of what the optical imaging camera looks like.

It's just a small wisp of gas coming out, and really all you're trying to do is make sure bolts are tight and gaskets are relatively -- that type of thing.

MS. MORENO: So is it your position that this is a good fit for th, you know, protection that we need to do?

MR. CORBETT: It's the best you can do.

MS. MORENO: Okay.

MR. LANGFORD: Can I just follow up on that?

MS. MORENO: Of course.

MR. LANGFORD: So somebody every day

seven days a week is going to be at the site, but we heard yesterday the site is going to be unmanned. Have you --

MR. CORBETT: We've tried to answer that question. I mean, somebody has to be on the site for the walk-around every day.

MR. LANGFORD: But they don't have to be there all the time?

MR. CORBETT: Yeah.

MR. LANGFORD: All right.

MS. MORENO: What does it mean that leaks will be fixed as soon as practicable? What does that mean to you when you're looking at the worst case --

MR. CORBETT: Yeah, that's a good question. It depends on the type of leak. You know, you go around, when you hear something, you go over, and it's the top of the valve, and it's got a little bolt there and it's loose, so you tighten it down. You know, that's as soon as practical.

If you go there and you look and you say, oh, no, the valve, you know, is cracked -- I'm just trying to throw out an example. Sorry -- the valve is cracked, then, oh, you've got to go to the warehouse. You've got to check out a valve. You've got to come back over and isolate the line.

It really is dependent on the leak itself, when it's found. There's just such a variety of things that could occur, that having anything more restrictive is difficult to make sure that they can apply -- comply on a continual basis.

I mean, that's a still part of the thing, is the source has to be able to comply. You can't write a limit that's -- you know, that they can't comply with.

MS. MORENO: You talked about a number of events, you have start-up, shutdown, pigging events, during which there might be -- there might not be opportunities for these, you know, emissions to be in place.

I think you mentioned 100 events, start-up, shutdown, 10 events per year for venting. Pigging events, maybe 15, and I'm not sure if I'm getting all those numbers right.

MR. CORBETT: Yes, you are.

MS. MORENO: Great. So tell me what -- how you measured any impact, any impacts from those events in meeting the limitations that were set.

So if you decided 100 events, what was the basis for the decision that 100 events would still maintain the compressor and compliance with the emission limits that --

MR. CORBETT: So the source looks at their professional experience, technical experience, with their equipment and their operation. They understand how they have operated at other facilities and how they've been operating in this facility, and proposed a number in application.

So the initial application came in with, you know, a hundred start-ups and shutdowns. It's important to remember why a turbine may start up and shut down.

So you have four turbines, they're all different sizes. The gas demand at the end of the pipe is going to be different at different times, and you want to operate your turbines, you know, as efficiently

as possible.

So you have varying sizes and you have multiple turbines. That allows you, when demand is low, to shut down turbines, not run those turbines, because a smaller set of turbines or a smaller load is required to generate the pressure to deliver the gas to customers.

At times you also have to plan for the maximum amount of gas that may need to be delivered at any time.

So there's -- we permit the max, so we permit all four turbines operating all the time, Which clearly, you know, demand fluctuates.

So a turbine may need to be shut down because demand isn't there. So as long as we understand that.

Then we go to how many times is that going to happen. That's based on the source's business model.

So they came in, they proposed a hundred events. What we then do is we look at what are the emissions to from those hundred events, and what can we do to get the maximum reduction from that.

And that's where the flare came in. If you're going to vent a hundred times at operating

pressure, that's my guess, and there are control technologies that could be cost effective and applicable to that type of scenario.

So when it was the flare, then the source would say, well, we still need to start up and shut down a hundred times.

But we have an alternative technology to make it so that we don't have to vent so much, and when you use that alternative technology, you get a lower emission rate.

Obviously, we're looking at maximum reduction, so a lower emission rate is better than the flare.

So that's how we got to, you know, the original proposal of a hundred start-ups and shutdowns for gas demand, which are still a lot, because they have to be -- the source to be able to respond to demand.

The 10 venting events that the source proposed is necessary for their maintenance of the turbines on an annual basis.

So that doesn't mean that they are going to use 10 every year; that means in perpetuity, the most that they foresee needing in any year is 10.

Does that make -- so, I mean, because

this permit lasts, you know, as long as the station lasts, those 10 events have to account for when the turbine is 20 years old.

MS. MORENO: DEQ did its own analysis to ensure itself that even with these various events that are anticipated, that they were allowing --

MR. CORBETT: Yeah.

MS. MORENO: -- that there would still be meeting of the emissions limits, would that --

MR. CORBETT: Yes. Yes, we accounted for emissions from pigging, the venting emissions from the start-up and shutdown venting events in our model analysis. Sorry, that was a longwinded answer.

MS. MORENO: Well, it was a longwinded question. I'm trying to make sure that I'm asking you in a way that relates to what you're trying to present here.

Is there a process for revisiting the number of those events that are allowed, and, you know, if things change, new technology comes in place, et

cetera, Or is this perpetuity, as you said?

MR. CORBETT: Yeah, BACT is reviewed at a point in time for a given project, whatever that project may be. Whether it be a new stationary source or some activity at a stationary source that was previously installed.

So theoretically -- key word -- theoretically, a source could get a permit as a new stationary source. If they never made another change to their facility, we would have reviewed back at that time and control technology would remain the same in perpetuity.

However, as we were talking about earlier, the National Ambient Air Quality Standards or the significant ambient air concentration could change, and those are health-based standards, not control technology-based standards.

And if those change, we can come back and require reductions in emissions outside of the BACT review.

Like Mike was saying earlier, we can apply BACT, and if NAAQS still isn't met, then BACT isn't good enough.

Alternatively, if they're well below the

NAAQS, they still have to apply BACT to get the maximum reduction. So we're -- you know, it's -- we're getting them both ways, so to speak.

Oh, yes, okay, and I did say that -- yeah, I started in on that and got sidetracked, so theoretically it can last forever, but that doesn't happen.

Sources need to make changes. They may want to replace a turbine for some reason. They need to come to us, and we would review two things.

One, whether the project at the time, activity at the time, required a new permit, which would require a new BACT analysis for whenever pollutants are there.

But we also have to do a review to make sure that any future changes we make to the permit don't affect the decisions we made here at this initial -- and that's true for every source.

MS. MORENO: I'm going to ask you one more question, then cede to some of my other Board Members, but let me go to environmental justice.

There was -- one of the slides has this long list of items that were done to community outreach, and I heard I believe it was Mr. Dowd say

that this is a significant part of environmental justice.

In looking at the Commonwealth's Energy Policy Act, Section 67-102, and I'm looking at Section A (11), and I'll just read it to you for purposes of background.

It talks about the requirement of ensuring that development of new, or expansion of existing, energy resources or facilities does not have a disproportionate adverse impact on economically disadvantaged or minority communities.

I know this is in the energy policy, you know, provision, but how is it that DEQ interprets that language with respect to its obligations to consider environmental justice?

And I'm talking about beyond just community outreach. It seems that there is more of a substantive requirement.

So the question is, is that right? Is that how you see it? And secondly, what was done to adhere to the requirement --

MR. DOWD: Well, let me say two things in response to that, Ms. Moreno. First, are the -- all the things we did go through. We had a very open and

transparent process, lots of engagement with the community.

When you look at disproportionate impact the way DEQ looks at it, and has really always looked at it, is that we administer our statutes, our regulations, evenhandedly.

And what we strive to do and what we've done in this case, is to assure that pollution, air pollution from this source, does not harm public health.

And we do that by doing the modeling and making sure it complies with all health-based standards.

Our view is that if there -- if all the health-based standards are being complied with, then there really is no disproportionate impact, because everyone is being subjected to the same air pollution but well below health-based standards.

You know, it -- at the -- well, and I'm not sure -- and, Mr. Paylor, I'll defer if you have anything more to say on that.

But that's really the way we have interpreted it. No one's health -- everyone's health here is protected to the fullest extent of the law.

MS. MORENO: You mentioned modeling, and I said I wasn't going to ask another question but --

MR. LANGFORD: One moment please, I'll just remind the audience, there will be no vocal interruptions or -- please. Please, folks. So go ahead.

MS. MORENO: You mentioned modeling, so I'll just do quick follow-up on that.

MR. DOWD: Sure.

MS. MORENO: I think in your presentation you said that selected background monitor sites are conservative, higher population, et cetera.

So again, on the same -- same theme on environmental justice and doing an assessment, how is -- what's the basis for the modeling? What inputs were put in for the demographics on the population that was modeled?

MR. CORBETT: So I think you're getting at the disproportionately adverse impacts, which --

MS. MORENO: Yes.

MR. CORBETT: -- are covered -- covered by the -- they have to be adverse, and if the NAAQS protect human health including sensitive populations with an ample margin of safety, that -- that can determine what adverse is, and so you're looking at --

MS. MORENO: My question is a little simpler than that.

MR. CORBETT: Oh, well, I think -- I'm sorry. I understand that. I did catch your question.

So that's kind of the lead-in. Then how do you determine compliance with the NAAQS, so what we tried to do was made sure that we selected places that had higher emissions than Buckingham County, that the emissions that we assumed were going to already be there in Buckingham County in this location are higher than what are actually there, so that's one level of concern.

MS. MORENO: Go over that again.

MR. CORBETT: So that when you're looking

at a background concentration, you're looking at the ambient air currently in the area.

MS. MORENO: Right. Yeah.

MR. CORBETT: So you want to maximize the value, the conservative nature of your analysis with this.

So we looked at places that had higher emissions than Buckingham County, so that they would have higher current ambient air concentrations of pollutants.

And that's a level of conservative nature -- of conservative -- whatever the word -- sorry. It's a conservative aspect of the review, because you start at a higher level.

Then we model, you know, the local sources that are there that wouldn't be impacting monitors from the sites that we selected.

We add those into our analysis there, so we're -- we have what we think this is conservative estimation of the concentration of the ambient air currently near the location.

Then we add in local sources, and model those sources in addition to the maximum short-term or

respectively short-term emission rates for each pollutant.

So we're building in, you know, a conservative factor in each level of our analysis to make sure that we're not underestimating the impacts.

MS. MORENO: When you say "local sources," did modeling include site-specific testing --

MR. CORBETT: Yes. Yes.

MS. MORENO: -- of the community Union Hill year by year?

MR. CORBETT: Yes. Yes. So the modeling analysis -- and this is one reason that the population density is -- only factors into the background concentrations, really, is because the modeling analysis, you know, puts a fence around the facility, and then the ambient air is anything outside the fence line.

So we modeled everything outside of that fence line. It's not specific to Union Hill, but it does include Union Hill. It goes out for 20-kilometer readings.

So we modeled the ambient air impact considering the background concentration, the emissions from Buckingham Compressor Station at worst-case values, and the local emissions from local sources to Buckingham out to 20 kilometers, and there are no exceedances anywhere in that.

MS. MORENO: One final question for this round: Did you do any assessment, any modeling or computation with the Chesapeake Bay, take any look -- was there any computation regarding Chesapeake Bay --

MR. DOWD: Bobby Lute, our Air Permit Modeler.

MR. LUTE: I'm Bobby Lute, DEQ, Air Quality Modeler. The Agency, we conducted our own analysis for the Chesapeake Bay.

Okay. And we conducted our analysis in accordance with the Chesapeake Bay program guidance. You know, our analysis resulted in -- as the comments, our response was 470 kilograms is what we calculated would be the impact, and our analysis was facility-specific, it evaluated the compressor station.

MS. MORENO: Thank you.

MR. LANGFORD: Are there questions from other members? Yes.

MS. RUBIN: So one is a comment and one is a question. My comment is to about evenhandedness, when you were talking, Mr. Dowd, to evenhandedness.

And I just wanted to make a point that one of the critical issues in contemplating environmental justice is that equality and equity are two different concepts.

So that which may appear to be equal and evenhanded on the face of it, is nonetheless maybe inequitable if the population begins at a disadvantage.

Therefore, some of the questions that my colleague, Ms. Rovner, asked are particularly appropriate in understanding what are the conditions under which this community can -- so there's not even a question there, just an observation.

Okay. Now, 1307 (E) says that we shall consider the facts and circumstances relevant to the reasonableness of the activity.

And this, in my mind, raises an issue of the activity, so we heard from those who support the

permit and those who do not, that the compressor station is an integral component of the ACP. They can't be disaggregated in that sense.

My question is: Has the activity of the pipeline, as a whole, been considered from the standpoint of air emissions?

MR. DOWD: No, ma'am. If you mean did we consider the emissions from the entire pipeline in considering the permit for the Buckingham Compressor Station, the answer is no.

That was a question that was litigated back with respect to the Greensville power station back a couple of years ago in which the court held that our authority -- that the Board's limited -- the Board's authority beyond our regulations was limited to the actual source itself, not to the entire -- not to the entire pipeline.

MS. RUBIN: So just so I understand, is there any condition under which you would look at the pipeline as a whole? For example, relative to that statement that you made --

MR. DOWD: Well, thank you for asking.

Not so much under this permit, but as you may know, Governor Northam has DEQ to begin a public process to look at the regulation of methane emissions from pipelines and compressor stations and landfills.

And that's a task we're about to commence undertaking, getting a public process together very shortly.

So the answer to your question is, yes, we are going to be looking at methane emissions from pipelines and compressor stations more generally and will be commencing that process shortly, but not through this particular permit.

We are looking, though -- you see the permit -- the Buckingham Compressor Station permit with the vent gas recirculation system does control methane as a co-benefit to controlling VOCs, and it controls methane, too, a very drastic amount.

MS. RUBIN: Thank you.

MR. LANGFORD: Mr. Ferguson.

MR. FERGUSON: I just have a couple of quick hearing-type questions. On the first --

MR. DOWD: Then I'll defer to Mr. Corbett.

MR. FERGUSON: I know that these numbers vary. What is a typical intake and exhaust PSI for a compressor station?

MR. CORBETT: From the -- the gas? The natural gas pressure in the pipeline? It's usually between 800 and 1200 PSI.

MR. FERGUSON: "800 and 1200." What about the CFM's average?

MR. CORBETT: Oh, I didn't -- the average, I'm not really sure. I think it's 1.6 billion cubic feet is at maximum capacity.

MR. FERGUSON: For --

MR. CORBETT: For the pipeline. If I remember the number, it's in the application. I think it's 1.6 billion cubic feet is the maximum capacity of the pipeline to --

MR. FERGUSON: Per?

MR. CORBETT: Oh. I think it's per day, per day.

MR. FERGUSON: 1.6 per day?

MR. CORBETT: Yes.

MR. FERGUSON: Okay. Thank you.

MR. CORBETT: And that's -- it's in the application.

MR. FERGUSON: Yeah.

MR. CORBETT: Okay.

MR. FERGUSON: You gave us a lot of numbers. Thank you very much.

MR. BLEICHER: I have a couple of questions. I guess maybe concerns as well. We've talked about the impacts, and it's clear from the Board's authority that we're supposed to consider

injury to and interference with health, safety or reasonable use of property.

And you've relied heavily on the NAAQS for defining that, but the NAAQS is supposed to protect both health and welfare.

And the question I have, maybe you've satisfied yourself that there isn't a significant impact on the Chesapeake Bay, but the point is that your -- well, your slide 41 says, There's no regulatory authority, no air regulatory authority.

First of all, you're part of DEQ, and DEQ has regulatory authority over water, and second, I don't think that matters anyway.

The question is the air impact on the Chesapeake Bay. I don't -- what I heard from the modeler was maybe that you decided it would be de minimis. That is an answer I can accept.

But the statement that you don't have any authority to think about water impacts of air pollution is simply -- I don't understand how you could possibly say that, so do you want to clarify that or -- do you want to say anything --

MR. DOWD: I don't believe we have the authority -- there's really not very much to clarify,

Mr. Bleicher.

We looked at the impacts, the impacts are well de minimis. Having said that, we don't -- there is not a mechanism under the State Air Pollution Control Regulation that handles that. Maybe through a TMDL process, that's possible.

But, you know, it's sort of interesting, and I think it's important to bring up at this point, is that, you know, last -- earlier this year DEQ permitted the four -- C4 GT Charles City County natural gas combined cycle unit, 1100 megawatts PSD permit, 280 tons of NOx.

And I think it's important to note that we received no substantive comments on that PSD permit at all. Chesapeake Bay Foundation, not a peep.

Much, much more nitrogen into the Bay, allegedly. A hundred miles closer to the Bay. And I raise that just because it's interesting, it's -- what projects get close public scrutiny seems to be hit and miss.

But it doesn't change my fundamental answer, is that under th e State Air Pollution Control Law, I don't believe we have that authority, but we did look at it, and we --

MR. BLEICHER: I can't understand why you don't think you have authority to protect -- to protect water quality impacts -- to avoid water quality impacts when you --

MR. DOWD: Well, first -- well I --

MR. BLEICHER: In fact, you told me in a phone conversation, maybe you want to take it back, that you have -- that DEQ has all of the authority that the Board has under 1307.

MR. CORBETT: Can I clarify on the slide? No, no, just want to clarify the slide.

MR. BLEICHER: Well, go ahead.

MR. CORBETT: No regulatory authority to regulate the TMDL in this Article 6 air pollution control permit. That's what the slide is intended to represent, so it's not that DEQ --

MR. BLEICHER: And when you do your modeling, where do you find your -- you've done

modeling to determine the human health impacts, right?

MR. CORBETT: Right.

MR. BLEICHER: Why don't you do -- why doesn't the same modeling -- why didn't you modeling of other environmental impacts?

MR. CORBETT: So actually, in response to comments, we actually did -- as Bobby was saying earlier, we did follow the Chesapeake Bay program official protocol and determined what the impact was and determined in that -- in determining what they -- you know, in agreeing to the Chesapeake Bay agreement, the Clean Air Act reductions including future growth, were considered.

And there were no source-specific requirements that were deemed to be necessary for Clean Air Act reasons.

So that -- I guess to your de minimis statement, which is more of a term than it is something I'm used to using, being a technical guy, but that's really what we're talking about.

We're talking about the fact that the entire program determined that we didn't need to have

source-specific air permit requirements.

Our Article 6 air pollution control permit requirements don't enable us to limit, you know, the TM -- to regulate the TMDL. Whether DEQ does not, or any -- and all those other things, that would be --

MR. BLEICHER: You don't always -- under any specific permits, how do we expect to meet any limits to protect Chesapeake Bay?

MR. CORBETT: Well, I'm not a TMDL expert. I'm --

MR. BLEICHER: But I'm not -- I guess maybe I'm not disagreeing with the decision of the permit, but the language on your slide is that you have no authority to regulate impacts on Chesapeake Bay.

MR. CORBETT: Yeah, that's what I --

MR. DOWD: Yes.

MR. BLEICHER: "Yes?"

MR. DOWD: I believe there's an awful lot

of information on the web with respect to your -- exactly question, Mr. Bleicher.

MR. BLEICHER: All right. I mean, I just find it amazing that you would suggest that water impacts don't count because they're covered by some other program as well.

And I just -- I'll leave that aside. Okay. So that's one comment.

The other is issue is site suitability, and you -- I'm looking at slide 49. And first, you suggest that -- and actually, the earlier slide, Mr. Corbett's slide, says that local government has responsibility for deciding whether the site is suitable.

That's technically correct that they have that responsibility, but it's also true that your regulations on -- the citation I have is 9VAC5-80-1230, under Article 6, and that's your own regulation.

It specifically says that you are to independently consider all relevant facts and circumstances with respect to site suitability, and you didn't mention that when you made your presentation.

MR. DOWD: And I'm happy to respond to it now. I didn't think it was necessary, and I'll tell you why. I am not going to stand here and presume to tell the Board what its authority is.

However, I am the Air Director for DEQ, and it is my job to interpret what these statutes and regulations mean to my air literature.

We interpret that provision, 1230, as applying the context of the State Air Pollution Control Law and Clean Air.

And I believe I answered it thoroughly as to why we do that, and as I said, I'm not going to -- I'm not going to argue as to what the Board's authority is --

MR. BLEICHER: But I don't understand how you say that this applies -- this is a rule that applies to part of your permit. All right. This is part of our agreement --

MR. DOWD: I won't disagree with that, and we interpret it differently.

MR. BLEICHER: So when it says you are to independently consider it, when did you independently

consider it?

MR. DOWD: We independently considered -- first of all, we independently considered factors one and four through our whole permit process. The first is the health analysis that we do for the modeling, and 4 is the BACT analysis.

Now, when you talk about three -- two and three, we defer to the local jurisdiction on that, we -- well, we exercise our authority -- we exercise our authority by requiring the local jurisdiction to provide us with certification that all local requirements have been met. We do a process --

MR. BLEICHER: That effectively leaves out -- this language -- the language is such compliance, that is, compliance with the local requirements, does not relieve the Board -- well, that's us I guess. But it's also you, since you say you have the same authority as the Board -- of the duty under this section to independently consider relevant facts and circumstances, which means you can.

If you've been told not to defer, you've been told you can't go forward without the local certification --

MR. DOWD: We read that -- we read it in the context of the State Air Pollution Control Law. We don't read it in the context of looking at factors beyond DEQ's jurisdiction.

MR. LANGFORD: I think the question --

MR. BLEICHER: Jurisdiction --

MR. LANGFORD: Please --

MR. BLEICHER: Well, I don't want to argue with him.

MR. LANGFORD: Please don't. I believe the question has been properly asked and answered.

MR. BLEICHER: I have a second question.

MR. LANGFORD: Go ahead.

MR. BLEICHER: You're saying that the local jurisdiction should consider all of the zoning factors, and you cite their statute, and you seem to

rely on other parts of the code for other things.

But you don't take into account the fact that -- you say the local government should consider -- actually, when you -- you said it orally.

You said must consider all of these factors. Okay. But what if they haven't. And you said, well, there's a procedure for that.

Well, that procedure is being pursued now. There's litigation challenging that certification, And I don't understand why you wouldn't think it would be appropriate to say you don't have an answer, that you have a valid certification as long as it's being litigated.

MR. DOWD: Mr. Bleicher, we're going to disagree on this. We don't believe DEQ's authority extends to matters beyond clean air. If it extends beyond our expertise, it extends beyond --

MR. BLEICHER: That's not what I'm asking. You say you're relying on this local certification. How do you decide whether the local certification is valid?

MR. DOWD: We -- they certify it to us.

If they're lying, you know, that -- the aggrieved parties to local certifications to local land use issues have to go to zoning appeals board and to circuit court. It doesn't mention DEQ as being a body of --

MR. BLEICHER: That's not the question. The question is, at what point you consider the certification to be final. If it's being challenged, it's not final.

MR. DOWD: We -- well, for 30 years we've always considered --

MR. BLEICHER: You avoid consideration that anything that isn't air -- technical air permit content, is not according to the law, we'll just say that.

MR. LANGFORD: Did you have another question? If not, I'll --

MR. BLEICHER: No. He's answered my questions. Thank you.

MR. LANGFORD: Are there other questions? Seeing none. Thank you. I believe next on the agenda is a period of time for the Permittee.

MS. BERNDT: From Dominion, Mandy Tornabene.

MR. LANGFORD: My understanding is that your initial statement is five minutes, and then you'll respond to any questions that we have.

MS. TORNABENE: Yes, sir. Good morning, Mr. Chairman, Members of the Board, Director Paylor. My name is Mandy Tornabene, and I am Vice President of Environmental Services at Dominion Energy.

First, I would like to thank DEQ for the work they put into the development of the draft air permit for Buckingham Compressor Station. Buckingham Compressor Station is one of the three Atlantic Coast Pipeline stations.

The other two, in West Virginia and North Carolina, are fully permitted and under construction. I would like to respond to some of the comments you heard yesterday as well as in the packets you just received, provide some proposed additional permit

language, including the community investment package that could be added to the draft permit upon consideration.

In response to public concerns and in the interest of robust environmental protection of the local community, no other permit in the nation requires compressor stations to install more controls.

Modeling shows that public health and welfare is protected, and the station will be -- or go beyond all air requirements.

In regards to greenhouse gas emissions, more than 75 percent of the natural gas delivered by ACP will be used to generate electricity in Virginia and North Carolina by allowing public utilities to continue to reduce -- continue replacing coal with cleaner, lower-emitting natural gas.

Dominion Energy is also an industry leader in reducing methane emissions. We are a founding member of the EPA's methane reduction program.

The Buckingham Compressor Station draft permit requires measures to significantly lower greenhouse gas emissions, including methane emissions, which will be reduced by 99 percent.

I would also like to address site suitability. The selection of the site was based on

two primary factors.

The first is the need to interconnect with the existing Transco pipeline in Buckingham. The second is commercially available land with sufficient acreage to build and operate the compressor station.

FERC, pursuant to its authority under the Natural Gas Act, approved this location after an exhaustive and comprehensive review of the site and alternatives.

The Buckingham County Board of Supervisors determined that the site is suitable and consistent with local land use by approving a special use permit for the station after extensive public comment and a public hearing.

The Board of Supervisors' approval is significant, because by statute and longstanding policy, site suitability is largely a local matter.

Under the Board's suitability policy, the suitability of a proposed facility specific location is determined by the local governing body, except as to questions involving the air quality regulatory authority of the Board.

Further, the policy provides that the Air Board shall consider site suitability only as it pertains to three things.

One, the air quality requirements defined by the Board's regulations; two, the health impact of air quality deterioration during malfunction; and anticipated impact of on surrounding communities.

Under the policy, the Board would approve or disapprove a permit application only within the context of these three air quality issues.

The DEQ draft permit meets each of these three requirements and is consistent with Agency guidelines. The station will meet or go beyond all applicable air permit requirements.

The air quality analysis demonstrates that emissions from the facility are below air quality standards.

The permit requires the recording of specific malfunctions and restricts blow-down-related emissions. No odor impacts are expected at the facility.

Under EPA's environmental justice policy and Governor McAuliffe's Executive Order 73, environmental justice is the fair treatment and meaningful involvement of all people.

Our work on this permit included discussions with the community because we agree meaningful engagement is important.

During the course of developing the Buckingham Compressor Station, the Company engaged in dozens of community meetings, events and activities with the residents of Buckingham County, and Union Hill, in particular.

Together, we developed a set of comprehensive proposals that will enhance public safety and help revitalize the community, while also addressing concerns expressed by residents.

My colleague, Carlos Brown, our Vice President and General Counsel, spent many months personally developing this investment package with the extensive input of the local community, and is here with me today.

The air permit project by DEQ ensures that there are no disproportionate high or adverse air quality impacts on any resident of Virginia.

This permit ensures that the criteria for board approval has been met. I thank you for the opportunity to speak to you today, and respectfully ask that you approve the draft air permit for the Buckingham Compressor Station.

I will be happy to any questions about the air quality conditions. Mr. Brown will be happy to address any questions about our community involvement.

MR. LANGFORD: Thank you. And are there questions of the Board Members? Mr. Ferguson.

MR. FERGUSON: Good morning. What have you done to address the community's concerns that were expressed yesterday?

MS. TORNABENE: Sure. In relation to environmental justice, I would like to hand that over to Carlos Brown.

MR. FERGUSON: That's fine.

MR. BROWN: Good morning or good afternoon, ladies and gentlemen. I appreciate the opportunity. I want to thank you for your diligent service.

As Mandy shared, my name is Carlos Brown. I'm the General Counsel and Chief Control Officer for Dominion Energy, and I serve as -- also as a team leader for our community engagement with the Union Hill community.

During the past year, I have had the honor to be one of two executive champions for Dominion's Environmental Justice team because of all of

the implementation of our New Environmental Justice Program.

In this work, I worked with Ben Wilson's team at Beveridge & Diamond, a leading environmental law firm, in helping the company to develop its environmental justice program.

We have proactively decided to develop an environmental justice program, it's part of our determination to set the standard for others in the industry where such leadership is sorely needed.

We are firmly committed to fostering robust community engagement in the areas that we serve. This work will help us to enhance our outreach and aid us in ensuring that all segments of our communities have the opportunity to be heard.

You have the draft air permit in front of you, and it imposes strict parameters on air emissions and station operations, our ability to protect the important environmental interests in the Buckingham County area.

We at Dominion have had the opportunity to understand the interests and hear the voices of the Buckingham community, particularly in Union Hill, through our extensive efforts and the resulting action-oriented approach on community engagement that

we chose to go above and beyond.

You heard me yesterday testify about community investment commitment, which I want to talk about, that we developed in Union Hill.

Before we turn to that content, I want to give a few minutes to describe the process for developing it.

The Union Hill community and Dominion are interested in a partnership that will be transformative. For the reasons -- for those reasons, we have made significant investments.

Our process involved over 30 meetings, some small, some in living rooms, some in front yards, some in restaurants, some on the steps of churches.

We have held many meetings with many individuals. In fact, at some point we were told, we don't want to hear you anymore, stop coming by, and that's important, because we wanted to go where the people were.

Our goal was to invest in such a way that the community was better off in the long term. The community raised the three key issues for which they sought our support.

It was grossly underserved in terms of emergency response and medical services. The community

in great need of recreational and educational facilities for children of all ages.

The community wanted assistance for those who were seeking jobs, opportunities in the immediate community. We worked hand-in-hand with local entrepreneurs to identify opportunities for them to grow their businesses and leverage off of the opportunity that our investment in the community had created.

We were told that one of the challenges to Buckingham is that many of them felt the need to leave in order to find opportunities to allow them to realize their dreams.

We've had the opportunity to partner with these individuals so their dreams can be realized. We also worked with Buckingham County officials.

We thank them for all that they did to support this project, but we also wanted to make that a lynchpin of this community initiative.

We obtained more than 50 signatures from folks in the community in support of the engagement efforts.

As Mr. Craig White mentioned the other day, the community is -- there's Union Hill, but there's a much broader community that exists there, and

we've touched all of those individuals, both black and white, wealthy and not so wealthy.

And I want to end with this. Dr. King, in 1968, told a story about a man, and he tells the story where he talks about interruptions, and he said that the form -- that there was an interruption, knocking on the door, and he talks about how do you respond to interruptions.

We want to acknowledge the fact that coming into Buckingham County with this compressor station in Union Hill creates interruption. We don't deny that.

The question is how we respond to the interruption. Do we take the opportunity to create something new and informative that can impact lives of these individuals or not.

I think that's what we've done with regard to our community investment package and with regard to the local engagement that we've had for many, many months.

At the end of the day, I want to say this very clearly, if it has not been said before. There was no discriminatory intent with regard to the placement of this facility.

This facility was placed where it was

because there was one landowner, and there was an intersection with the Transco pipeline.

And we worked with the community and community organizations to find a way to make sure that is a win-win. There was no discriminatory intent.

I've sat and I've met with Ms. Ella Rose and with Mr. John Laury. I've walked where the slave burial grounds are. I've driven the long, winding roads.

Some of the narrative you've heard is not necessarily the entire story of Union Hill, and I want to be very clear that I personally, as well as this company, is committed to making sure that we have meaningful engagement from all -- for all the community citizens.

And the other thing I want to leave you with ultimately is that this is actually an opportunity for this Board that is concerned about environmental justice.

It is great to hear that there's that level of interest and compassion for individuals who may be underserved, disadvantaged, who have been marginalized.

The level of proactive engagement that we have done here we believe sets the standard in the

nation, and if this permit is adopted, you will send a signal and a standard -- set a standard in Virginia that all others will follow.

We did not respond and engage in the level of activity and community engagement that we did in Union Hill because we thought that this permit would not -- would be at risk.

We did it because it was the right thing to do. I did it because I grew up in communities like Union Hill. I have the privilege of being a member of a family that since 1750 had the same land.

I understand how people can be tied to land. I know how important that is, and I think that after these issues became known, and we became aware, and I was charged with, you make it right, you figure out what we have to do in this community to make it right.

And that's important, I think, for this organization to do that, and I believe if you adopt this permit, you will be setting a standard that all others will follow. Thank you very much.

MR. LANGFORD: Thank you. Do we have more questions? Mr. Ferguson?

MR. FERGUSON: Thank you. Is the 20,000-square foot community center, is that site-specific at this point?

MR. BROWN: No, it is not. There is a community development corporation formed, that community development corporation will work with and in concert with Dominion to identify appropriate locations.

The commitment that has been made is the commitment of the funding, $5 million in total, approximately $3.6 million to be used toward community facilities.

MR. LANGFORD: Ms. Moreno, I believe you have questions?

MS. MORENO: Yes. Thank you very much to both of you for your presentation. I'm looking at a very thick document called, Community Engagement, and I also saw that there are some continuous emission monitoring provisions that are proposed.

Again, I'm just stating the obvious at this point because I haven't had a chance to read this, so I have a couple of questions regarding, as you

called it, the response to what you've heard on environmental justice concerns.

I think both of you mentioned the public safety piece to that, but can you identify either in here or in the permit provisions that are proposed on the continuous emissions monitoring, what components of the plan address human health impacts?

Public safety is a little bit different than that, and as I heard comments here yesterday, the environmental justice issues were focused around things like some commenters asked for additional monitoring to be specified.

And I believe I heard continuous emissions monitoring yesterday. Some commenter talked about site suitability in the context of that, that there was, I think it's fair to say, a focus on human health effects.

And I'm wondering if you could pull some of those pieces out for me as we sit here with your documents, not having reviewed them.

MR. BROWN: So I'll start and then I'll let Mandy chime in, so in the numerous meetings we had, those concerns were raised.

And when we got to the table with --

there probably was about 16 or 20 community member representatives who wanted to engage in a very active way with regard to developing this plan.

We began to level set with regard to where the true desires where, bringing information to the table with regard to the low level of emissions that were being produced by the facility, how it compared to other communities that we talked about, these other communities that lived near.

The concern shifted. And actually, there was a woman by the name of Joyce Littman who was probably one of the most outspoken opponents.

I'm sure there's a video out there about all of her statements. She's actually an Air Force colonel who had -- who was a pediatric nurse, and she had the most pointed concerns.

And after getting the data and really level setting, they determined that that was not principal concern.

The principal concern really was this emergency medical -- these emergency medical services. Now, with regard to emissions modeling, I'll let Mandy address that, but I think the general sentiment was that there were adequate monitoring capabilities there to evidence the fact that we were meeting standards.

However, in awareness and appreciate of mutual concerns, I think we're prepared to offer CEMS further.

MS. TORNABENE: Yes.

MS. MORENO: So would you elaborate a little bit on that?

MS. TORNABENE: Sure. We heard over and over again yesterday there were some concerns about the level of monitoring, that that's required in the permit currently for things like NOx, which is the biannual testing.

We also have to do the monthly emissions calculations as well, so there's ongoing monitoring. There's lots of ways to monitor currently the permit, but we recognize people were looking for more continuous monitoring for pollutants.

And so when we looked at what we had at another facility to monitor, we got theirs for NOx, which would provide a continuous monitor for NOx emissions.

The other thing that has been there that would also provide some more monitoring or oversight is the semiannual portable emissions test for stability

and safety, so instead of doing them every other year, the fact testing would also do portable emissions testing on a semiannual basis for CO and VOC.

MS. MORENO: And these are proposals that would be part of the draft permit?

MS. TORNABENE: Yes.

MS. MORENO: Okay. I have three other questions. When you were discussing the site selection process, you mentioned the alternatives that were considered in describing the basis for selecting this site. I don't recall seeing anything about that. Could you elaborate on that?

MS. TORNABENE: Sure. I'm going to have to turn it over to Mr. Gangle.

MR. GANGLE: Good afternoon. My name is Richard Gangle. I'm the Director of Environmental Services with Dominion Energy. I believe your question was alternatives that were considered.

MS. MORENO: I heard there were, and it

piqued my interest.

MR. GANGLE: Okay. Sure. As part of the FERC project -- FERC is the lead federal agency. That's part of their review. They required us to do an alternatives analysis.

We provided that information on alternatives, including -- I believe I heard some commenters asking about electric compression. So we looked at a variety of alternatives aside from putting the compression at Buckingham station.

We submitted that information to FERC. FERC analyzes it, and they go through a process of submitting data requests to us, asking for more information, and then they summarized that analysis in their environmental impact statement.

And then that is what they used to develop their FERC for it. Through that environmental impact statement, they determined that the Buckingham Compressor Station, where sited, was the preferable option, preferable alternative.

MS. MORENO: And what alternatives were considered? Because I had not reviewed the FERC --

MR. GANGLE: FERC requires us to look at several different alternatives, including system alternatives, so they will require us to at least evaluate use the electric compression.

When I say "system alternatives," are there any other pipeline means to avoid putting a compressor station in there, including looking at other interstate natural gas pipelines.

So there's a variety of alternatives they look at, and then they do the analysis and include it in their impact statement.

MS. MORENO: I have -- do you have a follow-up on this? Okay.

MR. BLEICHER: Yes, I do. We don't have the information in the record that you're describing, the FERC report. I've seen the FERC opinion, but I haven't seen any environmental impact statement in the record.

Besides that, I would just appreciate knowing why this is the -- is this the only place you can put it? Are there advantages to this location for you? How did you get to the Buckingham County location in the first place?

There's the whole state of Virginia you could have -- and other places in the same county that you could have put this. And I just wondered how you got --

MR. GANGLE: Sure. So as Ms. Tornabene mentioned, two of the critical factors in looking at a site for a compressor station are the availability of land, and then the customer needs.

And one of the customer needs on this project was to be able to connect to the existing Transco pipeline. Where our facility is located is actually where the Transco pipeline -- we intersect at the proposed facility.

So we were -- you know, there is an evaluation that goes on. Where can we find enough land to put it, and where do our customers need us to us put. Now, there are other factors that we have to consider.

But when look at the ability to put our facility directly on where our customers say they need to connect to, you know, moving it away from that connection point means additional impacts, be it pipelines, be it there's not electricity service, and we have to run electricity lines.

I mean, there are a lot of considerations

that when you look at where to site, you have to consider.

MR. BLEICHER: Well, and I'm -- explain to me -- I don't know -- I just don't understand what you're doing. Are you actually going to connect the Transco pipeline to your pipeline?

MR. GANGLE: So we will have a -- Transco has an existing natural gas pipeline. We, based on our customers' needs, are going to connect to that pipeline.

What that allows our customers to have is more than one supply of natural gas, so that if there is an interruption upstream or another portion of the interstate natural gas network, they have an alternative source to be able to get gas off of the ACP pipeline to serve their energy needs.

MR. LANGFORD: Just a follow-up to that. So that connection would be a physical connection, and for the most part you're describing a product that's going from Transco in to ACP; is that correct?

MR. GANGLE: That's correct, and it will be -- it will be a physical connection with metering to

regulate both ways. We will have the ability to take off and put on.

Because one of the things you look for is to have a reliable network of pipelines. What that means is you want to be able to get gas from multiple locations in case there is an interruption.

Especially considering that the majority of this gas is going to go to the production of power, you want to make sure that there's, you know, not interrupted power.

MR. BLEICHER: That raises one of the other questions. The statement that I heard most of this gas you project is going to be used in -- to generate electricity in Virginia.

But I thought that your most recent resource -- recent projection indicated that you were not going to be building more natural gas by generating units in Virginia?

MR. GANGLE: So that is our integrated resource plan. That is looking forward. There are, as Ms. Tornabene mentioned, existing coal facilities within both Virginia and North Carolina which are looking to transition to a cleaner fuel, that fuel is

natural gas.

That is what our customers are looking for, is to get a supply of natural gas to help them not only convert their existing coal fleet potentially, but also if there is a need to, as you mentioned, install new generation using natural gas.

Now, that is only a portion of what the supply is going toward. We're also -- a portion of this supply is going to fund, you know, consumers out on our lateral, out in Chesapeake.

As you heard from VNG yesterday, they have a need for this gas, so while 75 percent is going to go towards clean power production, there are other customers that are going to use this for residential, industrial and other uses.

MR. BLEICHER: Clean power production is Dominion facilities, correct? Is that what I understand?

MR. GANGLE: I'm sorry?

MR. BLEICHER: The clean power production in Virginia is Dominion facilities?

MR. GANGLE: I'm not aware.

MR. LANGFORD: I think the question is he referred to some coal-fired plants I think in North Carolina and Virginia. Is that your question?

MR. BLEICHER: Well, yes. I'm wondering aren't the plants -- Virginia plants Dominion plants?

MR. GANGLE: I'd actually like to delegate to help me Ms. Amanda Prestige.

MS. PRESTIGE: Hi. Good afternoon. My name is Amanda Prestige, and I am the Manager of the Natural Gas Infrastructure Development Group.

And I think what you're asking is, is it just going to help with Virginia clean power? We have several customers for this pipeline, and they are all using it to help generate cleaner energy.

It's also going straight to residential facilities, industrial facilities and commercial, so it is going to help customers that we have on this project.

MR. BLEICHER: Well, that -- okay. That

doesn't quite answer my question. How much of this is going to go to Virginia electric generating?

MS. PRESTIGE: So it all depends on the percentage of the capacity that the customers have signed up for. I don't have those numbers in front of me.

MR. BLEICHER: Can you make a rough estimate? Is it mostly electric generating plants, or is that just a minor thing? And I guess other question is this, is there any plan to export any of this gas?

MS. PRESTIGE: There is no exporting of the natural gas.

MR. LANGFORD: Are you --

MR. BLEICHER: I guess that's it.

MR. LANGFORD: Ms. Moreno, do you have another question?

MS. MORENO: These are very short questions. Again, things that were brought up quite a

bit yesterday.

There's a -- I understand there's a burial ground, and I believe your general counsel, Mr. Brown, mentioned that.

Could you tell me a little bit more about, you know, either the proposed location of the compressor station and what has been discussed to address that point, if at all, whether if the environmental justice outreach and conversations you've had -- people were very passionate yesterday about that issue -- and cultural resources and those kinds of things. I'm very interested to know how you accounted for that in your proposal.

MR. BROWN: So thank you very much, so the location, perhaps will a little bit imprecise, is about two miles from where the facility is located.

And so historically, the land, as has been discussed, was owned by individuals that owned enslaved African-Americans, and so there is a long history in that property.

But the known enslaved persons' burial ground that is documented is about two miles from the facility.

MS. PRESTIGE: And to follow up on that, to the extent that we were to find any human remains, we have a policy and process that we're required to follow by FERC.

If we were to identify any human remains, we stop work, and we work with other organizations to ensure that we address any type of artifacts that we find appropriately.

MS. MORENO: Okay. That's helpful. My final question has to -- again, another request that was made -- it had to do with a request for a safety plan, an evacuation plan, and we heard from DEQ about why that might not be necessary in this case.

Have you considered looking at that as a possibility, given the very serious concerns that some of the residents expressed regarding, you know, just information in case something happens, what do you do?

MS. TORNABENE: Yes. And so if you look at the Board of Supervisors special use permit, it actually requires us to have an emergency response plan.

You know, one of Dominion's core values is safety. Safety is one of the foremost things on our

minds on a daily basis.

We operate over 150 compressor stations across this nation in a safe manner, and one of the ways we do that is to plan.

We make sure that we are ready and prepared for any type of safety incident that might occur at one of our facilities, and we will have a safety plan for Buckingham compressor station.

We have been working with the local community, with the safety task force, actually, and we had them reach out to counterparts where other compressor stations are located to make sure what they do in response to safety concerns, like our safety task plan.

And so we believe that we will have the appropriate safety measures in place. That has been addressed by the Board of Supervisors in the special use permit.

And we will continue working with the community to make sure we have the right plan in place.

MS. MORENO: And that will be in the plan, that will be made available to the public?

MS. TORNABENE: Yes. It's required in the special use permit.

MR. LANGFORD: And a follow-up. Even if it's part of the SUP, but it has not yet been completed, is that the same or -- at least it hasn't been shared apparently because some people yesterday didn't think they'd ever seen it?

MR. GANGLE: So there are actually two plan requirements in the SEP. One is an emergency preparedness plan, and the other is a crisis response plan.

Both of those plans have been drafted, and we've shared them with the local emergency responders currently.

So we're still in the process of making sure, first, response from them was good -- but, you know we're continuing to revise it, because we want to make sure the plans are right before we put them in action, so there's actually two plans required.

MR. LANGFORD: Yes, I understand. Thank you. That very well answers my question. Mr. Ferguson, I believe you have one more?

MR. FERGUSON: Thank you. I have

extended family in the southside part of Virginia, Brunswick County, Emporia, Isle of Wight, Lawrenceville, along Route 58 corridor.

And I understand the economic stress that has occurred along with that corridor with the closing of IP and the closing of the Greensville -- things like that.

Unemployment has skyrocketed, and the poverty levels have been exacerbated because of these closures, and we have already determined in the Tidewater area that the pipelines that we have going to the Tidewater area to our ports and -- are maxed out, and that there is no longer any pipe capacity to put more industry in that Virginia Beach corridor.

And if you come away from the shoreline, the natural progression of industry will be Isle of Wight County, Suffolk, Portsmouth, like Senator Lucas's remarks reflected yesterday.

Will these counties be able to take advantage of the gas line and supply, have a supply of natural gas along the way of the pipeline, to build industrial parks and factories and so forth and so on?

MS. PRESTIGE: Hi again, Amanda Prestige, so we will be considered an open-access pipeline, which

under the Federal Energy Regulatory Commission Rules and Regulations we have the ability to accept any requests to tap into our pipeline.

MR. FERGUSON: Thank you.

MR. BROWN: I just wanted to add in response to Ms. Moreno's question about the safety plan, that we are also funding the county to engage a consultant, to help the county develop an emergency response plan, which it did not have in addition to the plans that --

MR. LANGFORD: I've been asked by our Board Members -- you handed us a packet, I don't want you to go through the details of what's there, but can you tell us what's in this package?

MS. TORNABENE: Sure. The first document is the special use permit, because a number of things that were brought up yesterday were addressed by the special use permit in the county.

We wanted to make sure you are aware of the conditions that relate to safety, that relate to noise, that relate to lighting and sound.

There are provisions for all of those things in that special use permit, and those are laid out in the Board of Supervisors' plan.

The other thing that is in there is the site suitability policy. You know, we talked a lot about site suitability rules, the statute and the regulatory language.

This is the actual policy that is in the major new source review permits manual from 2002, and it --

MR. LANGFORD: That would be this document?

MS. TORNABENE: Yes, sir.

MR. LANGFORD: DEQ Permit Program Management?

MS. TORNABENE: Yes, sir. And what that does is we believe -- it goes through -- it provides the intent behind the rule.

I mean, I've been practicing environmental law for a long time, and thankfully, I no longer have to do that.

But -- I still practice law, but, you know, we also have to look to guidance and to preamble to Federal Register and to letters from Attorneys General to better understand the intent of statutory and regulatory language, because quite often, it's not very clear, and it can change.

And so we based it -- the board policy from 1987, which was again adopted in 2002 on site suitability very clearly lays out how the Board is charged with interpreting the regulations concerning site suitability, and in so, clearly lays out the relation to air quality.

MR. LANGFORD: And then there's some other documents here. There are two -- a couple other documents in --

MS. TORNABENE: Oh. The other document is the conditions, the proposed conditions on CEMS and portable analyzers.

The other condition that we didn't talk about is the addition of ensuring that the community investment package in the permit to require us to go into that community investment agreement -- am I calling it correct? -- the memorandum of

understanding. I'm sorry.

And then the last -- we actually -- we also discussed working with the State and providing the State money to cite another ambient air quality monitor within the state wherever the State believes that it's the most appropriate to monitor on an ongoing basis.

Currently, there's, I think, 24, somewhere in that range, but to get to the comments yesterday about, you know, having more data on the ambient air and ambient air quality.

MR. LANGFORD: And then it looks like there's a final document, what is that?

MS. TORNABENE: That clearly lays out the package that we have worked with the local community on in relation to investing in the community and interacting with some concerns that they identified when we met with them over the last couple of years.

MR. LANGFORD: Okay. Regarding the ambient air quality, I don't know if I'll speak for the air department, but coordinating is usually good, but it's at a cost. I don't mean to install it, but ongoing to maintain it, so --

MS. TORNABENE: We would provide the funding for both of those.

MR. LANGFORD: All right. Thank you. One more.

MR. BLEICHER: Just I -- I'm looking at this document, this policy document, and I see language that's in bracket that sounds like it might be something that the Air Board or somebody would say --

MS. TORNABENE: It's printed directly off of the website. We did not adjust or edit any of the language.

MR. BLEICHER: This is the policy?

MS. TORNABENE: Yes, sir.

MR. LANGFORD: Are you talking about the DEQ policy?

MR. BLEICHER: Yes.

MR. LANGFORD: Okay. Do we have any other questions for --

MS. TORNABENE: Yeah, agreed.

MR. LANGFORD: Do we have any other questions for Dominion? Given the time, I'm going to call a recess for lunch, and we will resume -- call it 1:30.

(Lunch recess taken from 12:20 p.m. to 1:32 p.m.)

MR. LANGFORD: The meeting is reconvened. Ms. Moreno?

MS. MORENO: Thank you, Mr. Chairman. I move to defer action on the permit, adjourn this Board meeting and take up consideration of the permit at the Board's meeting on December 10th, 2018.

MR. LANGFORD: Is there a second?

MR. FERGUSON: I second that.

MR. LANGFORD: We have a motion and a

second. Is there discussion on the motion? Ms. Moreno, do you want to start?

MS. MORENO: Sure. I believe that we should defer decision on the permit until the Board's meeting on December 10th, 2018, as this would give the Board more time to consider the information the Board received from the public, from DEQ, and from Dominion Energy during the course of these proceedings.

MR. LANGFORD: Do others have comments they want to make?

MS. ROVNER: Let me preface this by saying that I have a broader understanding of environmental justice than some of what I heard articulated this morning.

I thought that was a very narrow construction of what environmental justice means, and the reason I feel it's important for me to point that out is because I do think site suitability and environmental justice are wrapped up together.

And I do think that we have a duty to consider the question of disproportionate impact, and a lot of what we heard today was relevant to that

question, the fact that the Board of Supervisors has issued a special use permit, the fact that there's been a lot of community engagement, the fact that the permit is protective of public health, the fact that there is no discriminatory intent here.

Yes, those things are all relative, but they are not a complete answer to the question of whether there is disproportionate impact.

I believe in order to have a complete answer to that question, we need more demographic information than we have been given about this community, and that's what I hope we will receive from DEQ between now and December 10th. Thank you.

MR. LANGFORD: Ms. Rubin.

MS. RUBIN: I agree with everything that Ms. Rovner has said, and I would just add to that I, too, share the view that this question of site suitability and disproportionate impact are inextricably linked.

I am not satisfied by what we've heard on some of the potential for disproportionate impacts. I don't think we have complete information. That's point one.

Point two is I'm also not entirely satisfied by what I perceive to be very narrow interpretation of where our authorities lie, and I think it is very difficult to look at just the compressor station, not taking into account the broader potential emissions impacts from the pipeline as a whole.

And I offer that as comments to my colleagues and move forward. Thank you.

MR. LANGFORD: Mr. Ferguson, do you have any comments? I'm just coming down the line.

MR. FERGUSON: I would just point out under the motion, we -- all we're doing is moving a decision to our next meeting, December 10th.

This will, as Ms. Moreno said, give us additional time to reflect on all of the things that happened in these last two days.

It is -- does not -- from the record, per se, it does not entail additional public comment or additional direct comment from the permittee.

So everything we've done these last two days is done, And the next meeting will simply be to consider all of the information that we -- in the

record and that we have before us, so I just want to make that clear.

There's no new public comment period, no opportunity for additional comment before the Board, that all has taken place, but we will obviously be under -- have consideration of the topic at the December meeting.

MR. LANGFORD: I will just -- the question had to do with, I think, perhaps negotiations on permit conditions, and I'll leave that to the staff.

We'll give them a date in December about what, if any, changes might have occurred with the permit, with all of this, so --

MR. FERGUSON: Thank you.

MR. LANGFORD: Yes, Mr. Bleicher.

MR. BLEICHER: I have some reluctance about postponing in part -- in large part because I think the -- I don't know whether we're going to learn anything much new. Although, maybe we will get some new information in this period of time and maybe the Board Members just need to think about this some.

I share the concerns that Ms. Rovner and Ms. Rubin expressed about the scope of environmental justice. It's got to mean more than just procedure because if it means just procedure, we already have procedures that everybody participates in.

And obviously I think it's clear that this community is not being surprised by anything that's happening at this point.

So I don't think there's any -- no nonparticipation question, people can say we didn't know about this. That is not the situation. The question is whether there is disproportionate impact, and whether there might have been a better location for this facility.

So that's one of the questions, and those things -- site suitability, and -- which I think we must also consider, and environmental justice work together, play together in the sense of the involvement there.

Beyond that, I have to add to the record that I have been advised by Mr. Paylor, the Director of DEQ, that the policy manual that is in the Dominion materials is no longer in effect, that the Board debated it a few years ago and did not formally repeal it.

But given there are differences of opinion about it, the Director would approve that policy manual, and so I think that's the indication of where we stand.

And I have seen subsequent regulations, one of which I read to you about the independent consideration by the Board of site suitability. I just mention all those things because I think it's important that some of this be in the record.

And so as I say, it's clear that some of the Board Members want to have time to think about this and work on it. I don't know that anything constructively can happen.

And I don't want to obstruct their efforts to do that. Maybe we'll learn new things by December.

MR. LANGFORD: Are there other comments on the motion? Seeing none, we have a motion to defer final action on the permit until our next meeting, December 10th, and to adjourn this meeting. All those in favor of the motion, signify by saying Aye.

BOARD MEMBERS: Aye.

MR. LANGFORD: All opposed say no. Motion carries. Meeting is adjourned.

(Whereupon, the proceedings were adjourned at 1:41 p.m.)

CERTIFICATE OF COURT REPORTER

I, Bria L. Pintado, hereby certify that I was the Court Reporter at the Board meeting of the AIR POLLUTION CONTROL BOARD, PROPOSED ARTICLE 6 PERMIT FOR THE ATLANTIC COAST PIPELINE, BUCKINGHAM COMPRESSOR STATION, heard in Richmond, Virginia, on November 9th, 2018, at the time of the Board meeting herein.

I further certify that the foregoing transcript is a true and accurate record of the testimony and other incidents of the Board meeting herein.

Given under my hand this 20th day of November, 2018.

Bria L. Pintado